

Wildlife Trafficking I

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Introduction

John C. Cruden
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I am honored to introduce two issues of the U.S. Attorneys' Bulletin devoted exclusively to wildlife crime. The articles in this Bulletin and the one in September will address a wide range of legal issues related to the enforcement of laws that protect our precious wildlife resources. This is a particularly important time to focus on these issues because there is increasing recognition of the significance of wildlife crime and the breadth and seriousness of the harms it can cause. This administration is in the forefront of international efforts to fight wildlife and timber trafficking and to stop illegal, unreported, and unregulated (IUU) fishing and seafood fraud. Robust criminal enforcement is critical to the success of these efforts.

Thanks to the close collaboration between the Environment and Natural Resources Division (ENRD) and U.S. Attorneys' offices nationwide, the Department of Justice has a long and proud record of strong enforcement of the federal laws protecting wildlife. This history helps us provide critical leadership, both nationally and internationally, in the fight to stop wildlife and timber trafficking and IUU fishing. These criminal activities harm the United States broadly. Illegal harvest and killing put marine, terrestrial, and plant populations at risk, impacting anyone who eats fish, runs a seafood restaurant, uses wood or paper, or likes to bird-watch, hunt, or photograph wildlife. It also damages law-abiding American industry by undercutting producers, such as fishermen, deer farmers, and timber producers, who operate legally and sustainably.

The Department of Justice, along with the Departments of State and the Interior, co-chairs the Presidential Task Force on Wildlife Trafficking (Wildlife Trafficking Task Force), which the President established by Executive Order No. 13648 (July 1, 2013) to develop a coordinated federal response to the deepening global crisis presented by illegal wildlife trafficking. Poaching and other illegal wildlife and timber trafficking have increased in recent years as this trafficking has become an increasingly profitable type of transnational organized crime. The impacts have been devastating. Wildlife trafficking threatens security, undermines the rule of law, hinders sustainable economic development, and contributes to the spread of disease. This illicit trade is decimating many species worldwide, and some—like rhinoceros, elephants, and tigers—face extinction in our lifetimes if we do not reverse this trend. The Wildlife Trafficking Task Force developed a National Strategy for Combating Wildlife Trafficking, released by the White House in February 2014, which focused on three key objectives: strengthening domestic and global enforcement, reducing demand for illegally traded wildlife, and expanding international cooperation. In early 2015 the Wildlife Trafficking Task Force issued an Implementation Plan that builds on the Strategy by setting forth specific steps to achieve each objective.

The Department of Justice also sits on the Presidential Task Force on Combating IUU Fishing and Seafood Fraud (IUU Fishing Task Force), which was established by Presidential Memorandum on June 17, 2014. IUU fishing and seafood fraud threaten the vitality of fish stocks and the sustainability of domestic and global fisheries. The black market from IUU fishing undermines economic opportunity for law-abiding fishermen around the world and deprives consumers of confidence that they are purchasing seafood that was legally and sustainably harvested. Combating IUU fishing is, therefore, a top U.S. priority. In December 2014 the IUU Fishing Task Force provided recommendations to the President for implementing a framework of integrated programs to combat illegal fishing and seafood fraud. These recommendations recognize the critical importance of strong and effective criminal enforcement in stopping this widespread and destructive practice. This past March, the IUU Fishing Task Force issued a

Final Report that builds on the recommendations by setting forth specific steps to achieve each recommendation.

Close partnerships—between ENRD’s Environmental Crimes Section (ECS) and the United States Attorneys’ offices across the country, and between the Department of Justice and other federal agencies that protect wildlife and their habitat and investigate wildlife crime—are essential to our success in fighting wildlife trafficking, IUU fishing, and other wildlife-related crimes. Together, we are responsible for prosecuting federal wildlife crimes, including violations of the Lacey Act, Endangered Species Act, and Migratory Bird Treaty Act, as well as related crimes, such as smuggling, money laundering, and criminal conspiracy. And working together, we have secured convictions in numerous cases of trafficking in internationally protected species, such as ivory, rhinoceros horn, and narwhal tusk; illegal fishing and seafood fraud; illegal exploitation of domestic wildlife, such as mountain lions, bobcats, rattlesnakes, and paddlefish; and illegal take of protected migratory birds, including bald and golden eagles.

Some of our recent successes have come through Operation Crash, an ongoing multi-agency enforcement initiative, led by the Department of Justice and the U.S. Fish and Wildlife Service (FWS). Operation Crash—named for the collective term for a herd of rhinoceros—focuses on the lucrative, and often brutal, trade in rhinoceros horn. This initiative has led to 20 successful prosecutions thus far, and we are continuing to unravel the sophisticated international criminal networks involved in these crimes. Prosecutions have involved the smuggling of raw or uncarved rhinoceros horns from the United States to China, the sale and trafficking of Asian art and antiques (including fake antiques) made from rhinoceros horn and elephant ivory, and the fraudulent sale of illegal rhinoceros hunts in South Africa to American hunters. Defendants in these cases have been sentenced to significant terms of imprisonment and the forfeiture of millions of dollars in cash, gold bars, rhinoceros horn, and luxury vehicles and jewelry. The September issue of the Bulletin will include an article on Operation Crash.

While these issues include important articles focused specifically on international wildlife trafficking and IUU fishing, the Department of Justice has a wide and varied wildlife prosecution docket. The articles in these issues of the Bulletin address a wide range of topics. One of the articles in this Bulletin provides an update on the Lacey Act, the single most important federal wildlife protection law. This issue also includes an article on wildlife charges in oil spill cases, written by members of the enforcement team that obtained a record \$4 billion in criminal fines and penalties in the wake of the 2010 Deepwater Horizon disaster, for charges that included violation of the Migratory Bird Treaty Act. Leading wildlife forensic scientists from FWS and the National Oceanic and Atmospheric Administration (NOAA) have contributed a May article on key forensic issues in wildlife cases. Other May articles address such matters as on IUU fishing and seafood fraud, use of the Lacey Act to stop the growing threat of invasive species, the powerful tool that restitution provides in wildlife cases, and how to best make use of civil and administrative alternatives to criminal enforcement.

A September article on ivory trafficking laws and prosecution methods will address the FWS’s recent and forthcoming administrative actions to effect a near-total ban in the United States on trade in elephant ivory and rhinoceros horn, as called for in the National Strategy to Combat Wildlife Trafficking. The September issue will also include a primer on working with non-governmental organizations, which are increasingly focused on supporting wildlife enforcement efforts both domestically and abroad. In addition, that issue will include articles on handling domestic fisheries cases, using the Endangered Species Act’s criminal prohibitions to protect habitat, obtaining sufficiently deterrent sentences in wildlife crime cases, and dealing with the complex intersection of Indian treaty rights and federal wildlife protection issues.

I am particularly pleased that the articles in these Bulletins reflect the contributions not only of prosecutors in ECS but also of ENRD’s Appellate, Law and Policy, and Wildlife and Marine Resources

Sections and Assistant U.S. Attorneys working in this area, as well as of many of our partners at FWS and NOAA.

I want to thank the Executive Office for U.S. Attorneys and the editors of the U.S. Attorneys' Bulletin for devoting these issues exclusively to wildlife crime. We welcome and encourage readers' interest in this issue, and encourage all Assistant U.S. Attorneys to become involved in the fight against wildlife crime. Please feel free to contact me; Deborah Harris, Chief of ECS; or Elinor Colbourn or Wayne Hettenbach, Assistant Chiefs of ECS who focus on wildlife crime.

Current Issues Arising in Lacey Act Prosecutions

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“It’s a tree,” said the blind man touching the elephant’s leg.
“It’s a wall,” said the blind man touching the elephant’s side.
“It’s a snake,” said the blind man touching the elephant’s trunk.
“It’s a spear,” said the blind man touching the elephant’s tusk.

—Traditional story

I. Introduction

The Lacey Act (16 U.S.C. §§ 3371–3378) was enacted in 1900 and has been amended six times, most recently in 2012. Its application to specific factual settings has been discussed in dozens of judicial decisions at every level of the federal court system, as the statute and the wildlife trade environment it is meant to address have evolved over the past 115 years. Yet, areas of developing interpretation and case law remain. Only the Ninth Circuit has published pattern jury instructions for Lacey Act violations, and they can be confusing and, in some areas, arguably incorrect.

In this article, we address several of the most recent areas of statutory and sentencing interpretation that a practitioner may encounter during litigation of Lacey Act trafficking and “false statement” cases. However, if you are considering Lacey Act charges, please call the Environmental Crimes Section for assistance and information on the latest legal developments.

II. Lacey Act felony trafficking violations: the “two-step” requirement

Lacey Act elements can be devilish to parse because they arise from two different sections of the statute and depend on the specific facts and type of the Lacey Act charge involved. They are simplified here for the purpose of the “two-step” analysis discussed below. The basic elements of a typical Lacey

Act felony trafficking violation include, at minimum, the following:

1. The fish, wildlife, or plant (f/w/p) was taken, possessed, transported, or sold in violation of a state, federal, foreign, or tribal law or regulation,
2. The defendant knew, or in the exercise of due care should have known, the f/w/p was taken, possessed, transported, or sold in some illegal manner,
3. Either the f/w/p was imported or exported, or the f/w/p had a market value of more than \$350 and the conduct involved commercial activity, and
4. The defendant knowingly imported, exported, transported, sold, received, acquired, or purchased the f/w/p.

See 16 U.S.C. §§ 3372(a), 3373(a) (2015).

Elements 1 and 4 above, often referred to as the “two-step” requirement of the Lacey Act, will be the center of this discussion. Element 1 contemplates the commission (by the defendant or someone else) of an “underlying” or “triggering” or “predicate” offense. Element 4 contemplates that the Lacey Act defendant committed one or more “overlying,” “prohibited acts” with the f/w/p that was tainted by Element 1. The Element 1 predicate, or underlying violation, must be distinct from, and completed before, the alleged Element 4 overlying conduct to validate a Lacey Act felony non-import/export trafficking charge.

Several federal statutes embody a similar framework, making criminal culpability dependent on the (usually prior) commission of a predicate violation. Such statutes include smuggling (receipt, sale, transport, etc. of merchandise imported contrary to law), money laundering (use of money from specified unlawful activities), and RICO violations (requiring predicate “racketeering” offenses).

A. Factual distinction

A recurring issue in litigation of Lacey Act trafficking violations involves the factual and/or temporal relationship between conduct establishing Elements 1 and 4—that is, the need to ensure that the fact(s) comprising each of those two elements are distinct from each other. The distinction is fairly simple when the “overlying” conduct in Element 4 is clearly separate in time and manner from the Element 1 conduct (for example, where a defendant later sells (Element 4) the hide of a previously illegally taken (Element 1) grizzly bear). Confusion can arise, however, when the acts comprising Elements 1 and 4 might be considered part of a single act or transaction, collapsing the two steps into one.

The Ninth Circuit explored the “two-step” requirement’s application to a single action in *United States v. Carpenter*, 933 F.2d 748 (9th Cir. 1991), a case involving a commercial goldfish farmer who was charged under the Lacey Act with “receiving and acquiring” (Element 4) protected migratory birds that he had “taken” (Element 1) in violation of the Migratory Bird Treaty Act (MBTA). Each year, the defendant and his employees routinely shot, poisoned, and trapped thousands of protected birds that preyed on fish in the farm’s 450 acres of ponds. To conceal the carcasses from authorities, they incinerated or buried those that did not fall into the ponds. The Government asserted that the Lacey Act was triggered even if the overlying “acquisition” (Element 4) conduct was identical to that comprising the underlying MBTA taking violation (Element 1), because the Lacey Act imposed a mens rea requirement on the acquisition of the wildlife, whereas the MBTA was a strict liability statute. The defendant argued that his “acquisition” (Element 4) of the birds was part and parcel of their “taking” (Element 1), all of which constituted only one illegal action in violation of the MBTA, not two separate steps required under the Lacey Act. The Ninth Circuit agreed, noting that “in order to violate the Lacey Act, a person must do something to wildlife that has already been “taken or possessed” in violation of law. The Ninth Circuit stated the following:

[T]he government’s position collapses the two steps required by the statute into a single

step—the very act of knowingly taking the bird in violation of laws is, in the government’s view, the act of acquiring the bird. That is not the meaning of the statute. The bird must be taken before acquiring it violates the Lacey Act.

Id. at 750.

Assuming the birds did not fall directly into the burial pits when shot, the evidence likely established that Carpenter and/or his employees moved some of the dead birds to the pits after they were killed. Thus, the Government could presumably have charged him with “transporting” (Element 4) wildlife that had been “taken in violation of the MBTA” (Element 1). It is a violation of the MBTA to, among other things, unlawfully “take” migratory birds. 16 U.S.C. § 703(a) (2015). “Take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to [do so].” 50 C.F.R. § 10.12 (2015). Thus, the illegal taking (Element 1) of a migratory bird was complete when a person at the facility, without authority, shot and/or killed a migratory bird. Unlawful “transport” (Element 4) was committed when Carpenter or his employees moved the birds from the place where they fell to another location. *See* 16 U.S.C. § 3371(i) (2015) (Lacey Act’s expansive definition of “transport” includes “move, convey, carry”). The Ninth Circuit approved this formulation one year after *Carpenter* in *United States v. Hobbs*, 967 F.2d 593, No. 91-30283, slip op. at 2 (9th Cir. June 25, 1992), an unpublished opinion affirming the Lacey Act conviction of a defendant who unlawfully killed a deer on the Colville Reservation in eastern Washington (Element 1), then transported the deer’s carcass to Seattle (Element 4).

Carpenter involved a hunting violation without subsequent acquisition or transportation. *Hobbs*, unlike the defendant in *Carpenter*, also transported the deer. Regardless of whether his shooting of the deer could by itself amount to an acquisition under the Lacey Act, *Hobbs* was properly convicted of violating the Act by transporting the deer.

Id. See also United States v. Cameron, 888 F.2d 1278, 1281 (9th Cir. 1989) (affirming the Lacey Act conviction of a defendant charged with acquiring *and* transporting halibut taken in violation of the Halibut Act).

B. Temporal distinction

Another frequently litigated issue is whether the underlying offense conduct (Element 1) must occur prior in time to the overlying prohibited act conduct (Element 4). In 1900 the Lacey Act’s anti-trafficking provisions were developed partly in response to the widespread poaching of game birds (Element 1), which were then transported to another state for sale as food (Element 4). In such cases, Element 1 facts occurred and were completed prior to Element 4 facts.

The Lacey Act contains language that has been interpreted as requiring this order of events for a violation. Section 3372(a) employs the present tense to describe Element 4 prohibited acts (import, export, transport, etc.) concerning f/w/p “taken, possessed, transported, or sold” in violation of an underlying law (Element 1), which may be read in the present or past tense. In § 3373(d)(1) and (2), the Act penalizes the defendant who knows, or should have known, that “the fish or wildlife or plants *were* taken, possessed, transported, or sold in violation of . . . any underlying law . . .” (emphasis added). The use of the term “were” in this section provides little guidance, because the word can be the plural past tense (suggesting Element 1 must occur before Element 4) or the subjunctive form of the verb “to be,” when the object has not yet occurred or is being imagined. Section 3372(c) is similarly ambiguous, defining a sale or purchase of wildlife as the guiding or outfitting of services “for the illegal taking, acquiring, receiving, transporting, or possessing of fish or wildlife.” This wording can be read to imply that the unlawful take would occur after the events constituting the “sale.”

Perhaps due to the language of § 3372(c), the issue of whether Element 1 must precede Element 4 has arisen most often in big game guiding cases, where a client contracts with a professional

outfitter/guide for a hunt, pays the guiding fee (usually weeks or months prior to the hunt), then unlawfully kills an animal (out of season, wrong location, wrong species, and/or with incorrect or no license), after which the meat and/or trophy parts of the animal are ordinarily transported to the client's home or taxidermist. Element 1—the unlawful taking of the game—usually occurs after a client has paid the guiding fee, but before all guiding services (such as field-dressing and transporting the game from the field) are completed. This scenario raises the question whether the commercial conduct for Element 4—the “sale/purchase” of wildlife, via the sale/purchase of guiding services—has occurred prior to the Element 1 unlawful take and, if so, whether this reverses a temporal relationship required by the Act.

In 1998 the First Circuit reversed the Lacey Act conviction of a big game hunting client under these circumstances in *United States v. Romano*, 137 F.3d 677 (1st Cir. 1998). The *Romano* decision arose from the somewhat unusual prosecution of a hunting client (rather than a guide or outfitter) from Massachusetts, who would send money each summer to an Alaskan outfitter as payment for a big game hunt scheduled for the fall. Upon arriving in Alaska in the fall of each year, the defendant fraudulently purchased Alaskan resident licenses, which were significantly less expensive than non-resident licenses. The outfitters were apparently unaware that the defendant's licenses were fraudulent and that each animal he killed was, as a result, taken in violation of Alaska state law. The Lacey Act counts charged the defendant with purchasing wildlife in interstate commerce (that is, purchasing guiding services for the hunts)—Element 4—that he knew was killed in violation of Alaskan law—Element 1. The First Circuit reversed his convictions based on two novel interpretations of the Act. First, the panel concluded that for a felony violation of the Lacey Act to be committed, Element 1 must precede Element 4: “Congress’ use of the word “were” [in § 3373(d)] implies that, at the time of the purchase [Element 4], the underlying taking, possession, or act of transport [Element 1] cannot still be in prospect; it must have already occurred.” *Id.* at 681. Second, the court explained that the defendant's purchase of the wildlife, via the purchase of guiding services, was complete upon his payment of the guiding fees prior to each hunt. Here, the court concluded that the client's payment of the guiding fee, months before any guiding services were rendered, completed his purchase of those services and, consequently, that the Element 4 purchase occurred prior to the Element 1 unlawful killing of Alaskan wildlife. While allowing for the possibility that a Lacey Act charge might arise if a client knows (or should know) upon booking a hunt that it will involve the “sale” of guiding services in violation of law (that is, that the guide would be breaking the law), the panel likened the *Romano* facts to a gun sale that remains perfectly legal even if the buyer intends to commit a crime with the weapon.

Two years later, in *United States v. Fejes*, 232 F.3d 696 (9th Cir. 2000), the Ninth Circuit agreed with the elements' temporal relationship described in *Romano*, but distinguished a “purchase” by a hunter from a “sale” made by a guide or outfitter. The *Fejes* court, citing § 3372(c) and the legislative history of the 1988 Lacey Act amendments described above, concluded that the “sale” of wildlife in the outfitting /guiding context “includes both the agreement to receive consideration for guiding or outfitting service and the actual provision of such guiding or outfitting services,” not merely the receipt of payment by the hunting client. *Id.* at 701. In this context, Element 1 facts (illegal take, possession, or transport of f/w/p) that occur before all Element 4 guiding/outfitting services are fully rendered (for example, before the parties leave the field and game parts are transported to a client's home or taxidermist) provide an appropriate basis for Lacey Act charges. The court, therefore, affirmed the conviction of the guide who orchestrated the illegal killing of a caribou during the course of a commercial hunt. *Id.* at 704. The panel noted that a contrary holding would lead to the absurd result that outfitters and guides would be immune from criminal liability so long as the plan to illegally take game arises after the client books a hunt.

C. When Element 1 is a sale

In 2005 an unpublished decision by the District of Minnesota in *United States v. Kraft*, No. 03-315, 2005 WL 578313, at *1–2 (D. Minn. Mar. 11, 2005), further articulated the themes in *Carpenter*, *Romano*, and *Fejes*—that the Element 1 predicate or “underlying” violation must be distinct from, and

completed before, the alleged Element 4 “overlying” conduct to validate a Lacey Act felony non-import/export trafficking charge. The inclusion of the *Kraft* decision in this line of cases distinguishes the requirements the Government must meet when the underlying violation is a sale, as opposed to when it is not a sale. In *Kraft*, the defendants sold and purchased in interstate commerce specimens of endangered species. Their transactions involved both a verbal or written agreement to make the sale or purchase and the payment of money. The items were subsequently transported across state lines.

The Government charged the defendants with a Lacey Act felony trafficking violation for each transaction on the theory that the sale of the specimens violated the ESA under 16 U.S.C. §§ 1538(a)(1)(E) and 1540(b)(1) (prohibiting the sale of, or offer to sell, endangered species in interstate commerce), and satisfied Element 1, and that the acquisition and transport of the specimens was the overlying conduct satisfying Element 4. The defendant sought dismissal of each Lacey Act trafficking charge, arguing initially that Element 4 was not met because the interstate transport did not “involve[] the sale or purchase of, the offer of sale or purchase, or the intent to sell or purchase” wildlife, which is a required additional element for a Lacey Act felony in these circumstances. *See* 16 U.S.C. § 3373(d)(1)(B) (2015). The Government argued in response that the transportation overlying conduct was inextricably entwined with the illegal ESA sale or purchase and thus satisfied Element 4.

The court found that if the transportation was so related to the sale, then, per *Fejes*, the transport of the specimen in each case was merely a completion of the ESA sale transaction and not, as required by the statute and explained in *Carpenter*, a distinct and subsequent action necessary to complete a Lacey Act violation. The district court noted that inasmuch as mere “transport[] . . . could never be the sole overlying conduct” for a Lacey Act non-import/export felony trafficking violation, there must be a sale or purchase, the offer to sell or purchase, or the intent to sell or purchase the f/w/p. The commercial aspect of the transport must relate to a future sale or purchase, not to the Element 1 conduct. *Kraft*, 2005 WL 578313, at *2 (citing *Fejes*, 232 F.3d at 702 n.6). The district court noted, “In the instant case, the Government did not allege activity from which a jury could infer commercial intent in a *subsequent* transaction. The Government only alleges the transport, the overlying violation, is related to the *prior* sale of the wildlife, the underlying violation.” *Id.* The Government relied primarily on *United States v. Senchenko*, 133 F.3d 153 (9th Cir. 1998), a Ninth Circuit Lacey Act case affirming the conviction of a defendant who had unlawfully killed several bears in violation of federal law and retained their gall bladders for later sale. The court distinguished *Senchenko* because, in that case, the defendant’s Element 4 intent to sell the wildlife was distinct from, and subsequent to, his Element 1 conduct, which was completed when he unlawfully killed the bears.

In short, *if* Element 1 (the underlying violation) is a sale, *and if* the proposed Lacey Act charge requires conduct involving sale or purchase (that is, it is a non-import/export trafficking felony), *then* a prosecutor should look for a second, distinct, sale or purchase to satisfy Element 4 (the overlying violation). If Element 1 is not a sale, Element 4 can be the sale of that item even if Element 1 was done in contemplation of the sale, or to fill a sale order (such as the killing of the bears in *Senchenko* in contemplation of the later sale of their gall bladders).

III. Lacey Act false labeling violations

A. Whose intent matters?

In 16 U.S.C. § 3372(d), the Lacey Act prohibits making or submitting a false record, account, or label for, or any false identification of, any fish, wildlife, or plant that has been, *or is intended to be* imported, exported, transported, sold, purchased, or received from any foreign country or transported in interstate or foreign commerce. The “is intended to be” language was added to the false labeling provision in the 1988 amendments to the Lacey Act. (Before 1988 coverage extended only to articles after they had actually been imported, exported, or transported.)

An issue that recently surfaced in a Lacey Act false labeling case is to whom the “intent to be transported in interstate or foreign commerce” element refers. In *United States v. Goldenberg*, No. 13-cr-123-1 (D.N.H. Nov. 6, 2013), charges were brought against the defendant for selling an endangered black rhinoceros mount to an undercover U.S. Fish and Wildlife Service (FWS) special agent and for making a false account of the rhino mount. Specifically, the indictment charged the defendant with one count of selling the mount in interstate commerce, in violation of the ESA, 16 U.S.C. § 1538(a)(1)(F), and one count of violating the Lacey Act’s false labeling provision, 16 U.S.C. § 3372(d)(2).

The defendant had advertised on Craigslist a “real mounted black rhino head,” with an asking price of \$35,000 or best reasonable offer. The ad stated that the mount was located in New Hampshire and that legally it must be sold to a New Hampshire resident. The agent, who lived and had his office in New Hampshire, contacted the defendant by email and later by telephone and told the defendant he was a Maine resident and was interested in purchasing the mount. The telephone number the agent provided to the defendant had a New Hampshire area code. The agent said he would bring the mount to Maine, where he would resell it, likely to someone overseas. The defendant told the agent that he was selling the mount to the first person who came up with the money and that he did not care what the buyer did with the mount once it left his yard. The defendant informed the agent that it was good enough for him if the agent simply told him he was from New Hampshire.

The agent, accompanied by another FWS undercover agent (who was a Maine resident and had his office in Maine), met the defendant in New Hampshire to purchase the rhino mount. During the transaction, the defendant gave the agents two copies of a handwritten document stating that the defendant was transferring the mount, that it was his understanding that the mount would not leave New Hampshire, and that he had given this information to the purchaser. The document included spaces for the purchaser’s name and address. The defendant told the agents that he was asking for the document to “cover his butt.” The agent from Maine signed the document and, with respect to the address he was providing, asked “Hampton?” referencing Hampton, New Hampshire. The defendant replied “you tell me, I don’t know where you live.” The agent replied that he knew most about Hampton, to which the defendant said “it works for me.”

At a pretrial conference, the district court judge suggested that whether the defendant’s intent that the mount would leave New Hampshire was speculative and that the Government was attempting to make him culpable for the buyers’ (agents’) intention to transport the mount from New Hampshire to Maine. The judge inquired whether a defendant could be held criminally responsible for an agent’s intent to transport the wildlife in interstate commerce. The court requested briefing from the Government on these questions:

1. Does the intent that the item be transported in interstate commerce refer to the seller?
2. Is the seller’s knowledge of the buyer’s post-purchase intent sufficient to support seller’s criminal liability?
3. If the buyer, in fact, does not intend to transport the goods across a state boundary (notwithstanding the representation made to seller), does that make a difference?
4. Does it make a difference if the horn mount was never actually transported in interstate commerce after the sale?

Goldenberg, No. 13-cr-123-1, at 7 (Mar. 12, 2014) (pretrial order).

While these questions were never answered in the *Goldenberg* case (the Government ultimately elected to dismiss the indictment), they are likely to arise again. It is not unusual to encounter a fact pattern where the false record is made in the course of a sale completed within one state, to a buyer who intends to transport, and/or does transport, the purchased item to another state. In *Goldenberg*, after the sale, the mount was transported to the case agent’s office in New Hampshire and never physically made it

outside the State of New Hampshire.

A review of the structure of the Lacey Act confirms that the intent that the item be transported in interstate commerce does not refer exclusively to the seller's intent: the seller's knowledge of the buyer's intent is sufficient. As in trafficking offenses, not all elements of the false labeling offense must have been committed by the potential defendant. The second element of the false labeling charge, like the first step of a trafficking charge, refers not to an action of the defendant, but to the status of the wildlife. In a labeling offense, it is required as the basis for federal jurisdiction that the wildlife "has been, or is intended to be" transported in interstate or foreign commerce. 16 U.S.C. § 3372(d) (2015). While the Government must show that the defendant knew the status of the wildlife, the statute does not require that he or she was responsible for creating that status. Thus, if a defendant makes a false record of wildlife knowing that it *has been* transported in interstate commerce, a violation has occurred even if the defendant was not the one to transport or intend that it be transported. Similarly, if a defendant makes a false record knowing that the wildlife *is intended to be* transported in interstate commerce, a violation has occurred even if the defendant is not the one intending that it be transported. While this is a logical reading of the statute, the issue has not yet been addressed in a judicial opinion.

Bearing in mind the old adage that bad facts make bad law, and with regard to the third and fourth questions above, a prosecutor should proceed with caution in cases where the seller's intent to move the item in interstate commerce is questionable, and/or where the seller mistakenly believed the buyer intended to do so (but never did). In such situations, it would appear that, in fact, no one intended for the item to be transported, nor was it so transported (at least after the sale), and thus an element of the offense would be lacking.

B. Materiality of the falsehood

Materiality is a second issue that has arisen of late with regard to false labeling charges. The text of the Lacey Act false labeling provision does not include a materiality element, which the Fifth Circuit noted in *United States v. Fountain*, 277 F.3d 714 (5th Cir. 2001). The *Fountain* court explained that Congress did not use terms with specific common law meaning, which would have had the effect of incorporating a materiality requirement. The court went on to conclude that "materiality" is not an element of the Lacey Act's false-labeling provisions.

However, the Northern District of Florida reached a different result in *United States v. Kokesh*, No. 3:13-cr-48, 2013 WL 6001052, at *8–9 (N.D. Fla. Nov. 12, 2013), and granted the defendant's motion for judgment of acquittal on false labeling charges involving illegally imported African elephant tusks. Kokesh was charged with two Lacey Act false record charges based on an email and a letter, each sent to the FWS, in which he claimed that he was donating the elephant tusks to a particular museum, rather than selling them. While a sale was illegal, a donation would not have been. The court acknowledged the lack of any expressed materiality element, but nevertheless found that materiality must be inferred because: (1) materiality is an essential element of most, if not all, fraud offenses (finding that although the false labeling prohibition is not technically a fraud offense, it can be considered such if "the nature of the crime is inherently fraudulent"), and (2) if materiality were not required, "the statute could apply to and criminalize harmless and innocuous falsehoods." *Id.* The court concluded that, "[r]equiring that the government prove that the falsity *involved a material matter and was capable of defrauding*—like in the typical 'false labeling' case involving misrepresentations about the size or type of fish and wildlife for sale—will help reduce potential misuse and abuse." *Id.* at 9. In dismissing the counts, the court found that "any falsehoods in the correspondences did not concern an important fact with the natural tendency to influence or was capable of influencing the recipient at that time[.]" *Id.*

Unlike a false statement violation under 18 U.S.C. § 1001, there is no materiality requirement set out in the Lacey Act false labeling prohibition. However, the record must be "for" or "of" wildlife,

requiring care in considering the relationship of the falsehood to the wildlife, including the potential for the falsehood to mislead someone about the wildlife. In short, is the lie truly of or for wildlife in a way that would generally be considered criminal in nature? False statements regarding quantity or species of the wildlife were examples of falsehoods that the *Kokesh* court recognized as being truly “of wildlife” and prohibited under the Lacey Act. However, there are many false statements that relate to wildlife that can mislead an enforcement officer or others where one could debate whether the record was “of wildlife.” Examples would be falsifying the address of a buyer where an intrastate sale is legal but an interstate sale is not, or falsifying the type of transaction in the wildlife where a donation is legal but a sale is not. In contrast to the defendant in *Kokesh*, the defendant in *United States v. Kraft*, 162 F. App’x 664 (8th Cir. 2006), mischaracterized the illegal sale of endangered species as a donation (which would have been legal) on a U.S. Department of Agriculture form in order to hide the illegal nature of the transaction. The *Kraft* court affirmed his convictions. *Kraft*, 162 F. App’x at 666.

In sum, lying about wildlife can take many forms and vary widely in significance. At one end of the spectrum is the classic fish story told around the campfire, and at the other is the customs declaration with false species names and undeclared wildlife contents. The factors pointed to by the *Kokesh* court, materiality and fraudulent nature, while not contained in the statute, nor perhaps appropriately applied in that case, are good ones to consider when making charging decisions.

Prosecutors should keep in mind that although materiality is not an element of a Lacey Act false labeling charge, they should use a common sense approach when charging this offense, considering carefully whether the falsehood is sufficiently “of wildlife,” misleading, and significant to regulating wildlife to warrant a criminal prosecution.

IV. The meaning of “wild” within the Lacey Act

“Fish or wildlife” is defined in the Lacey Act as “any wild animal, whether alive or dead, including . . . any wild mammal, bird, reptile, amphibian, fish, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, whether or not bred, hatched, or born in captivity, and includes any part, product, egg, or offspring thereof.” 16 U.S.C. § 3371(a) (2015). *See also* 50 C.F.R. § 10.12 (2015). Defendants sometimes challenge the application of this definition to captive-raised animals, even when they are from “wild” species. To date, all such challenges have been rejected.

In *United States v. Bernal*, 90 F.3d 465 (11th Cir. 1996), the defendants were convicted of violating the ESA and the Lacey Act for attempting to export two endangered captive-bred primates from a zoo in the United States to Mexico. On appeal, the defendants argued that the Lacey Act was not applicable because the statute does not apply to animals bred in captivity. The court rejected this argument without discussion, characterizing the claim as “wholly meritless.” *Id.* at 467 n.4.

In *United States v. Condict*, No. CR-05-004-SPS, 2006 WL 1793235, at *3 (E.D. Okla. June 27, 2006), the district court held that whitetail deer born and raised in captivity are “wildlife” because the Lacey Act “clearly indicates that otherwise wild animals do not cease to be wildlife simply because they or their progeny are no longer found in the wild.” The defendant was charged with two counts of violating the Lacey Act by receiving wildlife (whitetail deer) sold or transported in violation of Oklahoma state law. The defendant contended that the deer were born and bred in captivity, completely domesticated, and had always been kept inside a fenced area. His view was that because the deer had never been wild, they were not wild as the term is commonly used and, therefore, did not meet the definition of “wildlife” under the Lacey Act. He also argued that the Lacey Act should not be applied to the deer he purchased because there was no legal authority applying the Lacey Act to “farm raised domesticated deer.” *Id.* The court disagreed, holding that the Lacey Act definition of “wildlife” does include “farm raised domesticated deer.” *Id.* The court relied on the language in the “wildlife” definition: “whether or not bred, hatched, or born in captivity, and includes any part, product, egg, or offspring thereof.” *Id.* The court also noted that the term “wild” is defined in another section of the Lacey Act as “creatures that, whether or not raised in

captivity, normally are found in a wild state.” *Id.* (citing 18 U.S.C. § 42(a)(2) (2015)). The court concluded that whitetail deer clearly fall within this definition.

In *United States v. Parrott*, No. 10-3764 (6th Cir. Sept. 16, 2011) (unpublished order), the defendant was convicted of 2 counts of conspiracy and 12 Lacey Act violations arising out of the trafficking of deer. On appeal, the defendant argued that the deer were not wild animals or wild mammals within the meaning of the Lacey Act because they were part of a domesticated herd that had been farmed. According to the defendant, “wildness” is evaluated at the specimen level, and because the deer in his case were domesticated, they could not be considered wildlife. The Sixth Circuit disagreed with the defendant’s reasoning and, in an unpublished order, held that the Lacey Act “covers any wild animal, including those born and bred in captivity.” See *United States v. Wainwright*, No. 2:14-CR-44(1), 2015 WL 896445, at *1 (S.D. Ohio Feb. 20, 2015) (quoting *Parrott*, No. 10-3764, at 2). The court was not concerned that the indictment did not use the word “wild” to describe the trafficked deer and saw no issue with the lack of proof at trial of the deer’s wild characteristics.

In another recent case addressing this issue, *United States v. Delaney*, 795 F. Supp. 2d 125 (D. Mass. 2011), the defendant was convicted of false labeling of frozen fillets of farmed catfish in violation of the Lacey Act and the Food, Drug, and Cosmetic Act. The defendant moved for judgment of acquittal. In challenging the Lacey Act false labeling conviction, the defendant conceded that the definition of “fish or wildlife” includes animals that were bred, hatched, or born in captivity, but argued that it does not apply to animals that have spent their entire lives in captivity and never lived in the wild. The Government relied on the definitions of “fish and wildlife” (in 16 U.S.C. § 3371(a)) and “wild” (in 18 U.S.C. § 42(a)(2)) for its argument that the fish in question were wildlife within the meaning of the Lacey Act. It also pointed to the legislative history of the Lacey Act, which provides “[t]he term ‘fish’ in the definition includes all species of fish, including tropical fish used in aquariums The Act applies to all species of fish.” *United States v. Delaney*, No. 09CR10312, 2011 WL 7099832 (D. Mass. Apr. 8, 2011) (Government’s Opposition to Defendant’s Motion for Acquittal) (citing S. REP. NO. 97-123, at 5 (1981), reprinted in 1981 U.S.C.C.A.N. 1748, 1754). In illustrating the difference between domestic and wild, the Government noted that a house cat is not covered under the Lacey Act, but a lion is, pointing out that it makes no difference if the cat has become feral or the lion is born and kept in a zoo. That is, the distinction between domesticated (as opposed to domestic) and wild is genetic, not locational.

The district court held that even if “fish or wildlife” was an element of the offense, the idea that an animal must at some point live in its natural state to be considered wild was “unworkable in practice and contrary to the accepted biological distinction between wild and domesticated animals.” *Delaney*, 795 F. Supp. 2d at 127. The court looked to the Britannica Concise Encyclopedia (among other sources) which defined “domestication” as the

[p]rocess of hereditary reorganization of wild animals and plants into forms more accommodating to the interests of people. In its strictest sense, it refers to the initial stage of human mastery of wild animals and plants. The fundamental distinction of domesticated animals and plants from their wild ancestors is that they are created by human labour to meet specific requirements or whims and are adapted to the conditions of continuous care people maintain for them.

Id. The court further held that the farmed catfish at issue, whether raised in captivity or caught in the ocean, is an unmastered species that was not bred to live under the care of humans, and thus qualifies under the biological definition of a “wild” animal. *Id.* at 128.

Most recently, in *United States v. Wainwright*, No. 2:14-CR-44(1), 2015 WL 896445, at *1 (S.D. Ohio Feb. 20, 2015), the defendant was charged with multiple violations of § 3373(d)(1)(B) of the Lacey Act, for interstate trafficking of farmed deer. The defendant moved to dismiss the indictment, arguing that it did not allege offenses against the United States because the deer were not “wild” within the meaning of the Lacey Act. The defendant argued that the deer could not be “wild” because they were born and

remained in captivity. In denying defendant’s motion to dismiss, the court stated that the text of the Lacey Act confirms that deer are “wild” regardless of their captive origins, as the statute defines “wild animal” to include “without limitation, any wild mammal . . . whether or not bred, hatched, or born in captivity.” *Id.* at *2 (quoting 16 U.S.C. § 3371(a)); *United States v. Parrott*, No. 10-3764, at 2. The holding verifies that the question is whether a species, rather than an individual specimen, is wild. *Wainwright*, at *1. The court further held that if Congress meant for an individual animal’s captive upbringing to matter, it would not have instructed the court to ignore it in the definition of “wild animal.” *Id.*

In cases involving a feral member of a domesticated species, prosecutors may struggle with the issue of whether the animal is “wild” within the meaning of the Lacey Act’s definition of “wildlife.” Consistent with the case law above, a feral member of a domesticated species would not be considered a wild animal. However, if a feral population, as a whole, has become biologically distinct from its domesticated population, perhaps arguably supporting identification as a distinct subspecies, it may be possible to consider the feral population wild. Such consideration should include consultation with genetic experts and an awareness that there is no case law on this issue to date.

V. Lacey Act market value in guiding/outfitting cases

The market value of f/w/p involved in a Lacey Act trafficking prosecution must often be proved both as a factual element for conviction, and again as a sentencing factor. However, the methods used to determine value in these two settings can be confusing. The practitioner wishing to preserve a felony count and effectively litigate a U.S. Sentencing Guidelines calculation must be aware of how these issues have been addressed in the courts.

A. Proving market value at the trial stage

In every Lacey Act “trafficking” prosecution, the Government must prove the defendant has committed at least one of the “prohibited acts” (import, export, transport, sale, purchase, or receipt—Element 4, above) involving f/w/p that were taken, possessed, transported, or sold in violation of an underlying state, federal, tribal, or foreign law (Element 1, above). *See* 16 U.S.C. §§ 3372(a), 3373(d)(1) (2015). In cases that do not involve the prohibited acts of import or export, a felony conviction requires the Government to prove that the “market value” of the wildlife is greater than \$350. 16 U.S.C. § 3373(d)(1)(B) (2015). (This is also true for Lacey Act false labeling violations under § 3372(c).) The term “market value” is not defined in the Lacey Act or relevant regulations. Absent a specific definition, courts usually instruct juries that the market value of f/w/p should be based on the price a willing buyer would pay a willing seller. *See, e.g., United States v. Stenberg*, 803 F.2d 422, 432–33 (9th Cir. 1986). In Lacey Act trafficking cases involving sales of wildlife items, such as rhinoceros horn, ivory, live animals, birds, plants, caviar, and the like, market valuation is fairly straightforward, normally starting with the amount actually paid for the f/w/p, and adjusted upward when the “smuggler’s price” fails to represent an accurate open-market value. *See, e.g., United States v. Dove*, 247 F.3d 152, 159 (4th Cir. 2001). But how should a factfinder calculate the market value of wildlife in a Lacey Act case involving a commercially-guided hunting or fishing trip, in which the thing being sold and purchased is, arguably, not the quarry, but the opportunity to pursue the quarry? Does the guiding fee accurately represent the value of the f/w/p in such cases, given that the fee might include costs (such as lodging and meals) not directly associated with time in the field, or might differ from the price at which the parts of the quarry could be sold? Does the answer to this question change depending on whether it is offered to prove the market value for the \$350 felony element versus the market value for sentencing?

In 1981 Congress folded the Black Bass Act into the Lacey Act and further amended the statute to address a “massive illegal trade in fish and wildlife” perpetrated by “well organized, large volume” criminal operations generating substantial profits and “grim environmental consequences.” S. REP. NO. 97-123, at 5 (1981), *reprinted in* 1981 U.S.C.C.A.N. 1748, 1754. Although the 1981 Lacey Act

amendments did not include a definition of “sale,” the Senate noted that “a commercial arrangement whereby a professional guide offers his services to illegally obtain wildlife is, in effect, an offer to sell wildlife.” *Id.* at 12. Three years later, the Fifth Circuit in *United States v. Todd*, 735 F.2d 146, 152 (5th Cir. 1984), relied on this legislative history to affirm the Lacey Act felony convictions of big game outfitters, based on their sales of guiding services to paying clients. Two years after *Todd*, the Ninth Circuit, in *Stenberg*, declined to rely on the legislative history to expand the definition of sale to include guiding services, noting that criminal statutes must be construed strictly, and concluding that an ordinary person would not interpret the word “sale” to include the provision of guiding services. *Stenberg*, 803 F.2d at 436. Congress responded to *Stenberg* in 1988 by amending the Lacey Act to specifically define “sale” and “purchase” of wildlife as including the exchange, for money or other services, of licenses or guiding/outfitting services for the illegal taking, acquiring, receiving, transporting, or possessing of fish or wildlife. See 16 U.S.C. § 3372(c) (2015).

In this pre-Guidelines era, value was directly relevant only in terms of proving the \$350 market value felony threshold. When Congress expanded “sale” and “purchase” in the Lacey Act to include exchanges of money for guiding services, it did not add any specific language addressing whether guiding fees should be used to determine the market value of the f/w/p, though courts had no trouble making the logical connection. In *Todd*, both defendants challenged their conspiracy convictions, arguing that the Government had failed to prove market value exceeding \$350. The Fifth Circuit panel repeated the legislative history of the 1981 amendments, stating, “The best indication of the value of the game ‘sold’ in this manner is the price of the hunt.” *Todd*, 735 F.2d at 152. Inasmuch as the defendants had offered illegal hunts for between \$1,000 and \$5,000, the conspiracy conviction was affirmed. However, the panel reversed one of the substantive Lacey Act felony convictions in which a defendant had initially offered a hunt for \$1,200, but agreed to accept only \$250 in “expenses” when non-trophy animals were shot. The panel explained,

It is true that, had one of the animals been large enough to mount as a trophy, the proof would have supported a value of \$1,200. Nonetheless, the statute requires proof of the value of the wildlife actually taken. The government offered no evidence that the value of the dead eagle, deer, or javelina exceeded \$350.

Id.

In 1992 the Ninth Circuit, in *United States v. Atkinson*, 966 F.2d 1270 (9th Cir. 1992), addressed the valuation issue in relation to the \$350 felony threshold in a case involving a big game guide who charged between \$1,000 and \$1,500 for each illegal deer hunt. The trial court instructed the jury that it could determine the market value of the illegally-killed deer by using either the price each deer would bring if sold on the open market (determined in that case to be less than \$150 each), or the “price paid for guiding services for the hunt in which the wildlife was taken.” *Id.* at 1273. The defendant, citing *Stenberg*, argued that it was error to let a jury value wildlife based on anything other than the aggregate value of an animal’s parts on the open market. The Ninth Circuit upheld the conviction, noting that the post-*Stenberg* Lacey Act amendments definition of sale includes guiding, and characterizing *Todd*’s conclusion— “[t]he best indication of the value of the game ‘sold’ in this manner is the price of the hunt”—to be “the proper method for valuing game taken on a guided hunt.” *Id.* The *Atkinson* panel rejected defense arguments that the state restitution amount for a poached deer, or the Lacey Act’s statutory fine, should be considered as an alternative method of determining market value, noting the absence of evidence that those figures were intended to represent valuation. *Id.* at 1274; accord *United States v. Anderson*, 60 F. App’x 761, 765–66 (10th Cir. 2003) (evidence was sufficient to support finding that market value of mountain lion was greater than \$350 because hunter paid \$1,500 for guiding services for hunt); *United States v. Fejes*, 232 F.3d 696, 703–4 (9th Cir. 2000) (district court did not abuse its discretion by declining to instruct on lesser-included misdemeanor offense required if the market value is less than \$350, because it was undisputed that Fejes sold guiding services for more than \$350). *Atkinson* was the first appellate decision to also address the valuation issue under the Sentencing Guidelines, discussed below.

B. Proving market value at the sentencing stage

In 1987 the U.S. Sentencing Commission created the U.S. Sentencing Guidelines for use in the sentencing of most federal offenses. Section 2Q2.1 applies to “Offenses Involving Fish, Wildlife, and Plants” and establishes a set of factors used to calculate sentences under federal wildlife statutes, including the Lacey Act. U.S. SENTENCING GUIDELINES MANUAL § 2Q2.1 Commentary, Background (2014). Market value of the wildlife involved in counts of conviction and relevant conduct is often the primary driver of the Guidelines calculation. Section 2Q2.1(b)(3)(A) provides that “[i]f the market value of the fish, wildlife or plants (i) exceeded \$2,000 but did not exceed \$5,000, increase by 1 level; or (ii) exceeded \$5,000, increase by the number of levels from the table in §2B1.1.” *Id.* Section 2B1.1 is the table normally used to calculate the number of offense levels corresponding with loss to a victim in a fraud or embezzlement case. However, “loss” calculation is not part of the § 2Q2 analysis. Instead, the table performs double-duty (as it does for other non-fraud sections of the Guidelines), providing simply a computation of offense levels related to market value. *See, e.g., United States v. Cho*, 136 F.3d 982, 984 (5th Cir. 1998) (Section 2B5.3’s reference to the fraud table incorporates only the table, not the other provisions of the fraud guideline.); *accord United States v. Koczuk*, 252 F.3d 91, 97 (2d Cir. 2001).

Whereas the Lacey Act is silent regarding how market value should be calculated in determining whether the \$350 felony threshold is met, Application Note 4 to § 2Q2.1 of the Guidelines provides this guidance:

When information is reasonably available, “market value” under subsection (b)(3)(A) shall be based on the fair-market retail price. Where the fair-market retail price is difficult to ascertain, the court may make a reasonable estimate using any reliable information, such as the reasonable replacement or restitution cost or the acquisition and preservation (e.g. taxidermy) cost. Market value, however, shall not be based on measurement of aesthetic loss (so called “contingent valuation” methods).

U.S. SENTENCING GUIDELINES MANUAL § 2Q2.1 app. 4 (2014). The Application Note thus contemplates two potential steps in determining the value of f/w/p for sentencing. In what might be called Step One, the court should attempt to determine the actual fair-market retail price, if such a value is “reasonably available.” If this can be done, the analysis ends there, and the figure, if over \$5,000, is applied to the table at § 2B1.1 to determine how many offense levels should be added. Step Two is triggered only when fair-market retail price is “difficult to ascertain,” whereupon the court may take an expansive approach using “any reliable information” pertaining to, one assumes, fair-market retail price, including, but not limited to, replacement, restitution, acquisition, and preservation costs, so long as they are not based on aesthetic/contingent valuation methods.

The question in sentencing of Lacey Act guiding cases is whether the guiding fee is a Step One or Step Two calculation. In other words, is the guiding fee, per *Todd* and *Atkinson*, the best indication of the value of the game “sold,” and thus the fair-market retail price of the wildlife involved in such cases? Put yet another way, if market value is based on price, and price is demonstrated by sale, and the Lacey Act declares the provision of guiding services to be a “sale,” isn’t the guiding fee—literally the sale price between a willing buyer and seller—the simplest evidence of market value, satisfying Step One? Or, should it be considered only as a Step Two approximation of the fair-market retail value of something else, such as the body parts of the f/w/p, when that figure is, for some reason, not reasonably available?

The Ninth Circuit’s decision in *Atkinson* was the first post-Guidelines case to address this question. The panel focused its valuation analysis on the initial question raised by the defendant as to whether guiding fees could be used to meet the \$350 felony market value threshold for a Lacey Act felony. It did not examine the language of § 2Q2.1 (or Application Note 4) in that section of the opinion, but merely agreed with the conclusion in *Todd* that “because an offer to provide guide services is an offer to sell wildlife under the Act, ‘[t]he best indication of the value of the game ‘sold’ in this manner is the price of the hunt.’ ” *Atkinson*, 966 F.2d at 1273 (citing *Todd*, 735 F.2d at 152). The defendant also

appealed the application of § 2Q2.1 to the case, arguing that “the market value of the deer in this case did not warrant a four-level increase in his sentence.” *Id.* at 1276. Having dealt with the value question thoroughly in the \$350 threshold section, the panel said only this about the sentencing question: “The district court calculated the market value of the deer by multiplying Atkinson’s standard outfitting fee (\$1,500) by the number of deer killed (14). The result was a total market value of \$21,000. As the district court correctly concluded, this corresponds to a four-level increase under section 2F1.1.” *Id.* *Atkinson* can thus be read to support use of the guiding fee as the Step One calculation for determining market value under § 2Q2.1.

Years passed without significant additional appellate elucidation of how Application Note 4 should be applied in Lacey Act guiding cases, or challenges to the valuation framework established in *Todd* and *Atkinson*. In 2012, however, the Tenth Circuit had occasion to address the sentencing valuation issue in *United States v. Butler*, 694 F.3d 1177 (10th Cir. 2012). *Butler* arose from the prosecution of two big game guides in Kansas for Lacey Act trafficking offenses based on illegal deer hunts for which they charged clients between \$3,500 and \$5,000 (depending on whether the clients were hunting with bows or rifles). Prior to trial, the parties asked the court to advise them how it intended to calculate the market value of the unlawfully killed deer in the case. The defendants suggested that the court value each deer at \$1,000, based on the sanctions imposed by Kansas state law for illegal deer hunting. The trial court rejected this approach, noting state penalties did not represent “market value.” It decided to value each deer based on the total amount a client paid to participate in the guided hunt, citing *Atkinson*, the long-standing tradition of market value, and the Guidelines’ reference to “acquisition cost” as an appropriate basis for determining market value. Although the trial court made reference to the Sentencing Guidelines in its pre-conviction order, it agreed to address the market value issue again at the sentencing stage, and said it would then consider evidence of taxidermy costs and the retail value of deer antlers, in addition to guiding fees. The order is a muddle: by contemplating a later reconsideration of valuation issues at sentencing, it can be read as acknowledging that valuation for purposes of the \$350 felony threshold should be distinct from the sentencing analysis, yet it also refers to the Sentencing Guidelines in this early stage of the case, including the Step Two concept of using “acquisition cost” as the basis for evaluating the felony market value element.

The *Butlers* pleaded guilty to Lacey Act trafficking felonies (among others). At sentencing, the defendants suggested a new valuation calculus, asking the trial court to consider the “acquisition cost” represented by the cost of taxidermy preparation for each animal (stipulated by the parties to be \$650). The parties agreed that there is no ready market for the parts of sport-hunted deer, though the Government submitted a table illustrating a “secondary market” for deer antlers, which are sometimes bought and sold by collectors. The trial court agreed that there was no ready market value for the deer and declared (again) that the guiding fee, not a taxidermy fee, was the principal evidence of what the clients paid to “acquire” the wildlife. Using the guiding fee, the court found that the total market value of the 35 deer involved in the case was \$120,000, requiring an increase of 8 offense levels.

On appeal, the defendants did not challenge the trial court’s initial felony threshold valuation (or seek reversal of their plea-based convictions on this or any other basis), instead challenging several aspects of their sentences, including the computation of wildlife market value. They argued that the court should have determined, after finding that no retail market for sport-hunted wild deer existed, that the appropriate (Step Two) reasonable alternative value was the acquisition and preservation cost, i.e., taxidermy. The Government, principally citing *Atkinson*, argued for a Step One approach to sentencing valuation, asserting that value is determined from sale price, that the wildlife was “sold” within the context of the Lacey Act, and that the price of that sale—the guiding fee—was the simplest expression of the wildlife’s value. This syllogism, the Government argued, obviated the need to substitute some alternative “reasonable estimate” of acquisition value, such as taxidermy. Alternatively, the Government noted, if an “acquisition” cost was to be used, the guiding fee was still a better representation of what the clients paid to acquire the deer than a taxidermy cost, which it likened to valuing a painting by appraising

its frame. Moreover, the Government reasoned, if all acquisition costs were to be included, why not include taxidermy, as well as guide tips and transportation and license costs, to the guide fee to calculate a total acquisition cost for each animal.

The Tenth Circuit panel began its analysis by stating, pursuant to the authoritative guidance of Application Note 4, that the sentencing court could have declared guiding fees to be the correct indicator of value only upon a finding that they represented either the fair-market retail price of the animals (Step One), or, if that price were difficult to ascertain, they were a reasonable estimate of value (Step Two). *Butler*, 694 F.3d at 1181. The panel determined that, in the absence of a specific definition of “value” in the Guidelines, the word should take its common meaning: the price at which a willing buyer and willing seller would agree to *exchange* the property or interest at issue—in other words, the sale price. However, the panel rejected the Government’s position, which relied on *Atkinson*, that the “sale,” as defined by the Lacey Act, could be used to ground a Step One conclusion that guiding fees represented market value. Instead, the court declared the Lacey Act’s definition of sale irrelevant to a Guidelines analysis, partly because § 2Q2.1 does not specifically include the word “sale,” and partly because § 2Q2.1 applies to several wildlife statutes, not just the Lacey Act. The panel characterized as “common sense” its conclusion that the guiding fees, which included accommodations and other incidental costs, did not correspond to the price *of an animal itself*, and that whether a deer “was shot on a luxury hunting expedition rather than a more rustic outing is of no import to a buyer of venison.” *Id.* Indeed, the panel went one step further, holding that “‘the fair-market retail price’ must be the price of the animal itself, not the price of an expedition to hunt the animal.” *Id.* at 1182. The Tenth Circuit discounted the trial court’s finding that no market value existed for the physical remains of the deer (despite the defendants’ stipulation to this fact in their pleadings), asserting that evidence regarding this conclusion was both insufficient and somewhat belied by the Government’s submission of an antler-value table). The panel remanded the case for resentencing. *Id.* at 1183. The panel explained, “If evidence at resentencing suggests that direct valuation is difficult or impossible, the court must make a determination to that effect before using other measures to estimate the animals’ value.” *Id.* Although the panel did not formally foreclose the possibility of using guiding fees as a (Step Two) reasonable estimate of value, it foreshadowed its likely response to a second appeal with this comment in a footnote: “it is by no means clear that the district court could base its estimate on the entire cost of a guided hunt, including incidental expenses like lodging and accommodations.” *Id.* at 1183 n.2.

In preparation for resentencing, the Government attempted to establish that no sensible estimate of value for wild deer is “reasonably available,” for several reasons. First, wild deer in Kansas are not “owned” by anyone and, once killed in a hunt, their parts are illegal to sell. Therefore, the consumer of venison envisioned by the Tenth Circuit to be the willing buyer in its sale analysis, is likely to be buying captive-raised or imported deer meat, not the deer from sport-hunted animals. Second, when certain deer parts such as taxidermy mounts, sinew, skins, and semen from trophy captive-raised animals are available commercially, values vary too widely for coherent assembly into a reasonable estimate of the value of the particular deer killed by the defendants’ clients. Moreover, the Government argued, trying to do so would be like valuing a racehorse based on the money its parts would generate if it were killed and sold. The district court was unmoved. In letters to counsel prior to the resentencing hearing, it declared that “if there is no legal market for wild deer meat, then the market value is a determinable figure: zero.” *United States v. Butler*, No. 10-10089-01, 01 (Apr. 15, 2013) (letter to all counsel). It further determined that it was not mandated to determine the fair-market retail price of an entire deer (or any particular part), so it could establish a value based on witness testimony regarding the value of deer parts that were found in routine commercial trade, such as antler and taxidermy mounts. *Id.* Nevertheless, at a sentencing hearing on this subject involving witness testimony on the valuation issue, the court established the market value of each deer to be zero and did not issue a written order explaining its final analysis.

To the extent that *Butler* is interpreted as a repudiation of *Atkinson*, its legal and logical foundation seems shaky. The panel concluded that market value for sentencing under § 2Q2.1 equates to

“exchange” (sale) price, but declined to apply the Lacey Act’s definition of “sale” to sentencing, because the term is not defined in the Guidelines, and the Lacey Act is the only statute under the umbrella of § 2Q2.1 that defines it. One could argue that the absence of contrary guidance in the Guidelines is an equally valid reason to apply the Act’s “sale” definition to valuation of guiding cases in that context. Nowhere in the Lacey Act or the Guidelines are we instructed to determine the value of an animal’s body parts, but the *Butler* panel imagined a “buyer of venison” who was not postulated by any of the litigants and did not exist for the deer illegally killed in the case. If, as the panel stressed, the retail market value of a commodity equates to sale price between a willing buyer and seller, it would follow that civil damages for non-performance of the relevant sale contract might be a valid measure of the transaction’s value. Common sense, invoked by the panel, suggests that should any professional guide fail to provide a guided hunt to a paying client, damages payable to the client would be measured by the amount he or she paid for the hunt, not the value of venison or antlers the hunter was prevented from obtaining. Similarly, when a commercially guided hunt does not result in a killed animal, the guiding fee is not refunded. Likewise, the question whether the particular fee in a case represents “a luxury hunting expedition or more rustic outing” is also inapposite: every commodity and service has a range of values based on the time, place, and manner of its exchange, which is why the “willing buyer/willing seller” foundation for establishing value is sensible and necessarily idiosyncratic. Far from being a flaw in the valuation calculus by eliminating some imagined average value, the price actually negotiated between a client and guide for a particular hunt—luxury or rustic—is the best (and only) indication of that “exchange’s” value. This is how markets and courts routinely value goods, services, and damages. For similar reasons, the suggestion that a guiding fee that includes “expenses” (such as meals and lodging) not associated with time in the field might overestimate the value of the wildlife also misses the point and the reality of guided-hunt arrangements. In *Butler*, the defendants conceded that they charged a fixed amount per deer killed, regardless of the particular services provided to each client, which could range from mere access, to lodging, accompanying the client in the field, and transport of game. The commodity being sold, for the same price regardless of whether the guides’ “expenses” were high or low, was the opportunity to shoot one deer. *See also United States v. Borden*, 10 F.3d 1058, 1063 (4th Cir. 1993) (affirming use of price of illegally-taken mussels, over defendant’s objection that only his profit should be considered when calculating value).

For these reasons, we view *Butler* as a fairly narrow procedural ruling concerning the two-step sentencing process contemplated in § 2Q2.1 Application Note 4, but not as a contradiction of *Atkinson*’s general proposition that, in the Lacey Act guiding cases, the fee charged by the guide or outfitter represents the value of the wildlife involved in the offense for both the felony market value element and in Step One of the Application Note 4 analysis. We recommend that prosecutors continue to argue the market valuation issue in Lacey Act guiding cases according to this rationale. ❖

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Prosecuting Invasive Species Cases

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I. Introduction

The number and magnitude of invasive species is bewildering. Stories of feral hogs, anacondas, zebra mussels, Asian carp, kudzu, water hyacinths, iguanas, and new invasive species, including viruses, appear weekly on the Internet. Equally daunting is the amount and wide range of harm caused by these invasive species that out-compete native species, destroy crops and fisheries, threaten health, and damage infrastructure to the tune of hundreds of millions of dollars in damages annually.

For example, one particular aquatic invasive species of concern is the quagga mussel (*Dreissena bugensis*), which invaded Lake Mead in Nevada, sometime around 2007. Originally contained to one river system in Ukraine, the Dnieper, the quaggas managed to spread to the Great Lakes in the United States, most likely through bilge water discharges. From the Great Lakes, the mussels continue to spread south and west hitching rides on recreational boats.

Quagga mussels and zebra mussels (*Dreissena polymorpha*) cause hundreds of millions of dollars of damage annually in the United States by clogging water pipes, irrigation works, power plants, marina support structures, and boat engines. Quagga mussels can affect water quality by filtering out important nutrients that other species depend upon for survival. The mussels also "bioaccumulate," or concentrate

toxins, such as the bacteria that cause botulism (*Clostridium botulinum*), in their fleshy bodies, essentially becoming biohazards. The fish that consume the mussels also ingest the concentrated toxins. The toxins move up the food chain, potentially causing the spread of disease among local birds and fish.

There are currently limited legal avenues available for the prosecution of persons introducing or spreading invasive species, but there is hope on the horizon. This article attempts to answer whether there are enforcement strategies for U.S. Attorneys' offices to pursue to stop, or at least hinder, the spread of invasive species.

II. The Lacey Act: a history of invasive species enforcement

Bob Anderson's extensive article on the Lacey Act is the starting point for anyone interested in prosecuting wildlife crimes. See Robert A. Anderson, *The Lacey Act: America's Premier Weapon in the Fight Against Unlawful Wildlife Trafficking*, 16 PUB. LAND L. REV. 27, 74 (1995). Adopted in 1900 and commonly associated with illegal "pot hunting," Department of Justice lawyers frequently rely on the Lacey Act to prosecute interstate transportation of illegally taken game. What is little known about the act is that one of its three primary original purposes was to prevent the "unwise" introduction of foreign birds and animals.

Major John Lacey, an ardent conservative Congressman, felt strongly that the United States needed to avoid more mistakes like the importation of the English sparrow, which he called "that vermin of the atmosphere." 33 Cong. Rec. 4871, 4871 (1900) (statement of Rep. Lacey). The original bill that Major Lacey sponsored provided the Secretary of Agriculture with the power to prevent importation of fruit bats, flying foxes, the hated English sparrow, and "other birds of that kind, which, in his discretion, he may regard as detrimental." See *id.* In one speech in support of the bill, Major Lacey went on a tirade about the mongoose's importation to Jamaica and how it turned the local rats into an arboreal bird-killing species, making the mongoose "a pest worse than the serpent that it kills." See *id.*

Another invader that may have catalyzed Major Lacey was water hyacinth, originally introduced as a decorative plant at the 1884 World Cotton Centennial in New Orleans. Water hyacinth takes over water bodies, blocking out sunlight and reducing oxygen levels in the water, which results in fish deaths. One early 1900s solution to the problem, House Resolution 23621, involved importing hippos to eat the plants and provide meat. The proposal never became law—a fortunate outcome if Colombia's current infestation of hippos released from Pablo Escobar's zoo is any indication.

In its current manifestation, the Lacey Act makes it illegal to ship water hyacinth in interstate commerce. 18 U.S.C. § 46 (2015). However, even a quick search on eBay will show a dozen shippers, with good feedback, willing to send water hyacinths to buyers.

III. The Lacey Act and other wildlife statutes

A. Using the Lacey Act against invasive species

Stemming the tide of invasive species, particularly aquatic invasive species (AIS), is a priority for many western states. The state of Idaho has been particularly concerned about quagga mussels. While currently free of any infestation, the state is worried that recreational boats coming from Nevada could introduce quagga mussels into Idaho. If introduced into the Snake River system, it would only be a matter of time before mussels reach Oregon and Washington. The Shoshone-Paiute Indian Tribe on the Duck Valley Reservation, which straddles the Idaho-Nevada border at the headwaters of the Snake River system, is acutely concerned that a quagga invasion could ruin the trout fisheries in several reservoirs they rely on for revenue. In a June 9, 2009, letter to then Secretary of the Interior, Ken Salazar, an Idaho state representative called on Salazar to implement policies at Nevada's Lake Mead to prevent mussels from leaving the National Recreational Area and specifically urged the use of the Lacey Act to prevent the

interstate transportation of quagga mussels. There are, however, a number of challenges to using the Lacey Act.

The Lacey Act’s little known step-child, 18 U.S.C. § 42: Sometimes known as the “injurious species provision,” 18 U.S.C. § 42 is technically part of the Lacey Act. It prohibits the importation and interstate transportation of animal species that the Secretary of the Interior finds to be injurious. The zebra mussel is one of the species specifically included within the statute. The statute allows the U.S. Fish and Wildlife Service (FWS) to make regulations to include other injurious species. For example, in 2012 FWS added three python species and the yellow anaconda (*Eunectes notaeus*) to the invasive species listed in 50 C.F.R. Part 16 (several other anacondas and a boa constrictor remain under consideration). Recently, the D.C. District Court, in *United States Ass’n of Reptile Keepers, Inc. v. Jewell*, No. 13-2007 (RDM), 2015 WL 2207603, at *1 (D.D.C. May 12, 2015), notified the parties that it intended to preliminarily enjoin the enforcement of the FWS regulations, which added four snakes to the list in 2015. Arguments are pending at this time regarding the scope and whether a stay of the injunction is appropriate. The case represents a serious blow to USFWS’s efforts to prevent interstate transportation of injurious species.

On June 25, 2014, Senate Bill 2530 proposed amending § 42(a)(1) by striking the reference to zebra mussels and replacing the reference with the genus *Dreissena*, which would include quagga mussels. The bill also makes it clear that the statute would not apply to interstate transport of prohibited species via water conveyance systems, including public water systems. The bill is currently in committee, however, and quagga mussels have not been regulated to date.

A violation of this provision of the Lacey Act is a misdemeanor punishable by up to 6 months in prison and/or a fine. This ineffective deterrent contrasts sharply with the 5, 10, and 20-year felonies provided in 18 U.S.C. § 43, a statute protecting “animal enterprises” from animal rights protestors. 18 U.S.C. § 43(a) (2015). To put it in perspective, burning down a pet store and causing over a million dollars in damage can net the offender 20 years in prison. Introducing an invasive species into non-infested waters causing billions of dollars in damages will see the offender serving 6 months at most.

Despite its weak sentencing provisions, this statute is a good option for prosecuting transportation of listed invasive species in interstate commerce. The Government need only prove the species is one of the prohibited species and that the defendant transported the species across interstate or national boundaries. No mens rea appears in the statute. Because the penalty is “relatively small” and does not cause “grave damage to an offender’s reputation,” the Government should argue that the crime is a strict liability offense. See *Staples v. United States*, 511 U.S. 600, 617–18 (1994) (quoting *Morissette v. United States*, 342 U.S. 246, 246 (1952)).

The Act also allows for immediate destruction or export of offending species and would presumably provide for decontamination at the expense of the importer or consignee of a contaminated vessel. 18 U.S.C. § 42(a)(1) (2015). There are, however, serious practical drawbacks to implementing inspections under this provision. For example, while the FWS maintains a wildlife inspection program, the focus is on ports and international borders. Boats or other vehicles carrying invasive species and traveling interstate usually face no scrutiny from the FWS. Moreover, the vast majority of invasive species, including quagga mussels, are not even designated as such pursuant to the Lacey Act.

The Lacey Act’s main provisions, 16 U.S.C. §§ 3371–3378: Many Assistant U.S. Attorneys are familiar with the standard Lacey Act prosecution. Most domestic cases are brought under 16 U.S.C. § 3372(a) and usually involve a taking of game in one state in violation of that state’s laws, followed by transport of the game to another state. This two-step process is the hallmark of a Lacey Act violation. The mens rea for a felony requires the defendant to act knowingly and the value of the wildlife to exceed \$350. Some invasive species, such as exotic snakes and some plants and mammals, may meet the dollar threshold. However, many invasive species have a negative value. Moreover, it often is difficult to prove beyond a reasonable doubt that a defendant affirmatively knew, for example, that when he or she

transported their recreational boat to a lake in an adjoining state, the defendant also transported quagga mussels in the bilge water he or she failed to properly empty. In those situations it is unlikely a felony Lacey Act violation would apply. However, some Lacey Act misdemeanors could apply.

To prove a Lacey Act misdemeanor, the Government must show the defendant “in the exercise of due care should know that the fish or wildlife or plants were taken, possessed, transported, or sold in violation of, or in a manner unlawful under, any underlying law, treaty or regulation” 16 U.S.C. § 3373(d)(2) (2015). There is no wildlife value element for the misdemeanor.

Arizona, California, Colorado, Idaho, Utah, and Vermont, for example, generally forbid the transport of quagga mussels within their borders. Utah law makes it unlawful for a person to “possess, import, export, ship, or transport a *Dreissena* mussel.” UTAH CODE ANN. § 23-27-201(1)(a) (2014). In order for the Lacey Act to take effect, the transporter would first have to possess or transport the mussels in Utah, then transport the mussels in interstate commerce. This would involve driving an infested boat to another state, regardless of whether that state had an existing mussel infestation law or any laws against transporting mussels. The initial illegal possession is the first step of the Lacey Act violation, and the transportation in interstate commerce would complete the violation.

For the most part, transporters are going to be recreational boaters traveling from state to state. To date, the Department of Justice’s focus has been limited to commercial boat haulers and other commercial users that are transporting invasive species across national and interstate borders. However, any repeat offenders or scofflaws who leave one jurisdiction for another after being told to clean their boat, or where there is other clear intent, thereby jeopardizing the economic and, ultimately, the health interest of other persons, as well as our natural resources, might warrant federal attention.

In addition, the false labeling violations located in 16 U.S.C. § 3372(d) have potential for AIS prosecutions. To prove false labeling, the Government must show the defendant made or submitted “any false record, account, or label for . . . any fish, wildlife, or plant which has been, or is intended to be imported, exported, transported, [or] sold” in interstate or foreign commerce. 16 U.S.C. § 3372(d) (2015). Arizona, for example, has a law requiring commercial transporters of certain boats to file AIS “Boat Inspection Reports” (BIR). ARIZ. ADMIN. CODE § 12-4-1102 (2012), Director’s Order 1 (2013). If a transporter hauling a boat from Nevada to Arizona falsified an Arizona BIR, claiming the boat was properly decontaminated when, in fact, the boat was not properly washed, this could be charged as a false labeling violation, provided that the falsity is sufficiently wildlife-related.

B. Lesser-known wildlife and plant-related statutes

The Nonindigenous Aquatic Nuisance Prevention and Control Act: Ballast water discharges were identified as vectors for the spread of invasive species as early as 1908 by one German researcher. The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, 16 U.S.C. §§ 4701–4751 (2015), provides, among other penalties, criminal penalties for failing to submit reports to the National Ballast Information Clearinghouse (NBIC). The NBIC is a joint program of the Smithsonian Environmental Research Center and the U.S. Coast Guard. Its mandate, brought about by the zebra mussel invasion of the Great Lakes, is to understand and prevent the introduction of nonindigenous species to the fresh, brackish, and saltwater environments of the United States. The purpose of the program is to monitor, control, and study ballast discharges to prevent introduction of, and to control, the spread of introduced aquatic nuisance species and the brown tree snake. The latter problem is confined to Guam (to date).

Under § 4711(g)(2), it is a class C felony to knowingly violate: (1) the regulations promulgated pursuant under § 4711(b) that relate to ballast discharge specifically in the Great Lakes, and (2) the regulations that pertain to vessels generally in § 4711(f).

The regulations that implement the Nonindigenous Aquatic Nuisance Prevention and Control Act

are found at 33 C.F.R. Part 151. Those regulations require a Coast Guard-approved ballast water management system (BWMS). Ballast water is required to come from public water systems, and ballast water exchanges must be made at least 200 miles out to sea. There are also extensive requirements for record-keeping. Failing to maintain an approved BWMS, failing to keep proper records, or making false entries in record books should, in theory, make for viable criminal cases. The prosecutions would be similar to the Act to Prevent Pollution from Ships (APPS) prosecutions that many U.S. Attorneys' offices and the Environmental Crime Section prosecute on a regular basis.

The Plant Protection Act: Congress enacted the Plant Protection Act (PPA) in 2000 to prevent the spread of plant pests and noxious weeds and to protect the agriculture, environment, and economy of the United States. The act has its roots in the Plant Quarantine Act of 1912. Congress made a finding that plant pests that are new, or not widely prevalent in the United States, constitute a threat to U.S. crops, plants, and plant products, and are a burden to commerce. 7 U.S.C. § 7701(1), (8), (9) (2015). The Act governs management of undesirable plants on federal lands and authorizes the Bureau of Land Management to manage noxious weeds and to coordinate with other federal and state agencies in activities to eradicate, suppress, control, prevent, or retard the spread of any noxious weeds on federal lands. The Department of Agriculture maintains an extensive list of plant pests at 7 C.F.R. § 340.2, with a corresponding list of noxious weeds at 7 C.F.R. § 360.200.

The PPA grants the Secretary of Agriculture broad authority to regulate the movement of plant pests. Specifically, the Secretary may issue regulations requiring that any plant pest imported, entered, exported, moved in interstate commerce, or mailed or delivered from any post office, be accompanied by a permit, have a certificate of inspection from the foreign country or state from which it is moved, be subject to remedial measures to prohibit the spread of plant pests, and be grown subject to appropriate post-entry quarantine measures. 7 U.S.C. § 7711(e) (2015). General regulations regarding the movement of plant pests are found at 7 C.F.R. §§ 330.100–330.111. Other regulations pertaining to plant pests include phytosanitary treatments at 7 C.F.R. §§ 305.1–305.9, importation of plants by mail at 7 C.F.R. §§ 351.1–351.7, plant quarantine safeguard regulations at 7 C.F.R. §§ 352.1–352.30, and export certification at 7 C.F.R. §§ 353.1–353.9.

While seldom used to date, the Act does have potential in prosecuting invasive plant species. Anyone shipping invasive plants in interstate commerce who did not obtain the appropriate phytosanitary permit or treatment would be subject to prosecution. Importers who fail to observe the appropriate quarantine laws could likewise be held accountable under the PPA.

IV. The Clean Water Act as a potential enforcement tool for AIS

In order to convict someone for a Clean Water Act (CWA) violation, the Government must prove that the defendant knowingly discharged a pollutant from a point source into a water of the United States without a permit. 33 U.S.C. §§ 1311(a), 1319(c) (2015). “The term ‘pollutant’ means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.” *Id.* § 1362(6). The term “pollutant” has been construed very broadly by courts. *See, e.g., Avoyelles Sportsmen’s League, Inc. v. Marsh*, 715 F.2d 897, 923–25 (5th Cir. 1983).

The term “biological materials,” on its face, appears to include aquatic invasive species, such as the quagga mussel. Several circuits would appear to support this theory. The Sixth Circuit found in *National Wildlife Federation v. Consumers Power Co.*, 862 F.2d 580, 583 (6th Cir. 1988), that fish entrained in a discharge from a hydroelectric dam are biological materials within the CWA pollutant definition. A district court came to a similar conclusion, holding that escaped non-native fish are pollutants. *U.S. Public Interest Research Grp. v. Atl. Salmon of Me., LLC.*, 215 F. Supp. 2d 239, 248 (D.

Me. 2002). This would appear to be very helpful to the discussion of AIS, like mussels. It may be possible to prove that a boat sitting in uninfested water contains mussels, but it would be difficult to prove a discharge of mussels from that boat beyond a reasonable doubt, as the mussels are essentially stuck to the boat. It would be far more difficult to prove a knowing discharge of a mussel veliger (the larval, mobile form) that escaped from a mussel attached to the boat and infested the water.

Another problem is that while “pollutant” is the critical operative term, the definition of “pollution,” also provided in the CWA statute, has been used to help define the meaning of “pollutant.” “The term ‘pollution’ means the “man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” 33 U.S.C. § 1362(19) (2015). Relying on this definition, the Ninth Circuit held that mussel wastes from a Puget Sound farming operation could not be included under the definition of biological material because the wastes were not manipulated by man. *Ass’n. to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc.*, 299 F.3d 1007, 1016 (9th Cir. 2002). Shells and natural byproducts are not waste products of a transforming human process. One could argue that the introduction of the live mussels meets the definition of manipulation in that the mussels are usually transported from one place to another via a mechanized process. It is certainly analogous to the introduction of non-native fish, as discussed above.

One could argue that just having a boat infested with living mussels sitting in a lake would qualify as a discharge. The question would be whether the boat infested with mussels is a “point source.” “The term ‘point source’ means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14) (2015). A court would likely require the Government to prove that if the boat is the point source, the mussels must somehow migrate off the boat into the water. A more easily provable path might be to argue that the trailer is the point source and that the boat with its attached biological contaminants is the pollutant.

It would be advisable that a CWA prosecution like this be based on some very special circumstances, such as well-documented discharge of live AIS into a previously clean water body, by someone who acted intentionally or had a very high level of knowledge, for example, from previous warnings.

V. Examples of successful prosecutions

There have been a number of successfully prosecuted cases involving invasive species. To date, most cases have involved aquatic species, such as invasive carp. Some of the cases concluded with large fines and, in one instance, required a defendant to go on the lecture circuit to schools and explain the dangers of breeding non-native chameleons.

- Polembros Shipping Ltd., a ship management company headquartered in Greece, pleaded guilty in 2009 to violating two counts of the Act to Prevent Pollution from Ships (APPS) onboard its cargo ship, *M/V Theotokos*. Polembros also pleaded guilty to a false statement charge and to violating the Nonindigenous Aquatic Nuisance Prevention and Control Act by failing to maintain accurate ballast water records, the first prosecution under the statute. The court sentenced Polembros to serve 3 years of probation. As a condition of the probation, all ships owned or managed by Polembros (20 at the time), were barred from entering U.S. ports and territorial waters for 3 years. Polembros also paid a \$2.7 million criminal fine and a separate \$100,000 community service payment to the Smithsonian Environmental Research Center. *See* Press Release, Dep’t of Justice, Polembros Shipping Ltd. Sentenced for Crimes Related to Pollution from Cargo Ship Traveling to New Orleans (Dec. 9, 2009), available at <http://www.justice.gov/opa/pr/polembros-shipping-ltd-sentenced-crimes-related-pollution-cargo-ship-traveling-new-orleans>.

- In 2012 Americas Marine Management Services, Inc., a cargo ship vessel operator d/b/a Antillean Marine, was sentenced to pay a \$1,000,000 fine for an APPS oil record book violation and one count of failing to submit reports to the NBIC, the latter in violation of the Nonindigenous Aquatic Nuisance Prevention and Control Act related to ballast water. Half of the fine was paid as community service into the South Florida National Parks Trust. *See* Press Release, U.S. Attorney’s Office, S. Dist. of Fla., Miami River Company Sentenced to Five Years Probation and \$1,000,000 Fine for Oil Pollution and Ballast Water Crimes (Jan. 20, 2012), *available at* <http://www.justice.gov/usao/fls/PressReleases/2012/120120-01.html>.
- Sony Dong and Duc Le were each sentenced in 2010 after pleading guilty to smuggling (18 U.S.C. § 545) Asian song birds into this country from Vietnam. Dong was arrested at Los Angeles International Airport after an inspector spotted bird feathers and droppings on his socks and tail feathers protruding from under his pants. Dong travelled to Vietnam to pick up three red-whiskered bul-buls, four magpie robins, and six shama thrushes. The birds were required to be quarantined and the bul-buls are listed as an injurious species, which means they pose a threat to people, native wildlife, or the ecosystem, and could be avian flu carriers. Dong served 4 months of incarceration and paid \$4,000 for care of 36 seized birds that were in his possession. Codefendant Duc Le received 6 months of incarceration and paid \$25,000 in restitution for costs incurred for the testing, quarantine, and care of approximately 50 birds seized from his residence. *See* Dep’t of Justice, ENVIRONMENTAL CRIMES SECTION MONTHLY BULLETIN, at 14–15 (July 2010), *available at* http://www.justice.gov/enrd/2010/July_2010.pdf.
- In 2008 William Stoner pleaded guilty to a misdemeanor Lacey Act violation for the importation of harmful fish, without a permit, across state lines. Stoner transported approximately 50 unsterilized Asian Grass Carp from Arkansas into Texas without a permit. He delivered the carp to a golf course, so they could be put in the ponds to help keep down the weeds. This allowed him to more easily rake through weeds and algae to find as many as 3,000 balls each dive, for which he was paid 10 cents a ball. Unsterilized carp devour marine vegetation and other fish so aggressively that they can alter an entire ecosystem. FWS agents ultimately were forced to recover and destroy the carp from five different water hazards at the country club, due to the risk that a flood event on the San Marcos River would allow the fish to escape the golf course and threaten native vegetation, including endangered Texas wild rice. The court sentenced Stoner to pay a \$2,000 fine; \$3,186.56 in restitution to Texas Parks and Wildlife; and \$5,000 in restitution to the National Fish and Wildlife Foundation’s Native Plant Conservation Initiative. *See* Dep’t of Justice, ENVIRONMENTAL CRIMES SECTION MONTHLY BULLETIN, at 19 (Oct. 2008), *available at* http://www.justice.gov/enrd/2008/LPS-190688-v1-ECS_Bulletin_2008_10_Block.PDF.
- Sung Chul “Daniel” Rhee pleaded guilty in 2004 to three Lacey Act violations for importing northern snakehead fish from South Korea. This injurious species is notorious because it can breathe air, walk on land, and, as an adult, voraciously feed on native fish and animals. The defendant admitted to importing the live fish in three shipments hidden in larger shipments of fresh seafood sent from Korea via Korean Air. Rhee’s company, Assi Super Inc., pleaded guilty to three felony smuggling violations and four felonies for illegal importation under the Lacey Act. Rhee and his company were both placed on 3-year terms of probation. The company paid a \$200,000 fine and Rhee was required to pay for advertisements in two Korean-language newspapers warning the community about the dangers posed by snakeheads—and, presumably, that individuals could go to jail. *See* Press Release, U.S. Attorney’s Office, Cent. Dist. of Cal., Owner of Koreatown Market Sentenced for Illegally Smuggling Snakehead Fish into U.S. (Jan. 24, 2005), *available at* <http://www.justice.gov/usao/cac/Pressroom/pr2005/016.html>.
- In 2005 Daniel Villanueva was sentenced to serve a 1-year term of probation for violating the Lacey Act. Villanueva, based in California, sold 50 Jackson’s Chameleons to a Michigan resident (Heffernan), who then sold 6 of them to an undercover FWS agent. Villanueva obtained the

Jackson's Chameleons from Hawaii where it is illegal to export them out of state. Jackson's Chameleons are prohibited from exportation because they are a nonindigenous species in Hawaii that are displacing indigenous species by taking up their habitat and consuming their food. Breeders of these chameleons in Hawaii let them run in the wild, and exportations increase the market for Hawaiian-bred Jackson's Chameleons, thereby increasing the incentive to breed more and cause further havoc for the Hawaiian native species. Heffernan's 1-year term of probation contained a special condition that he speak to elementary school children about the importance of preserving endangered species. *See* Environment and Natural Resources Division, Dep't of Justice, *Trials, Indictments, Pleas*, ENVTL. CRIMES SECTION BULL. 18–19 (2005).

- In 2012 Canadian pet dealer Jim Ip, a/k/a Muk Leung Ip, pleaded guilty to Lacey Act violations for attempted trafficking in prohibited fish. Between May 2011 and August 2011, Ip arranged for the export, transport, and sale of 180 Giant Snakehead fish from Ontario, Canada, into the United States. The Giant Snakehead fish, as noted above, is a voracious feeder and highly invasive predatory freshwater fish native to Southeast Asia. Snakeheads can grow to more than 3 feet in length. Under New York law, the Giant Snakehead fish is listed as a non-native fish that is unlawful to possess, transport, and cause to be transported, imported, and exported. Under Canadian law, the Giant Snakehead fish is listed as an invasive species that is unlawful to sell. The court sentenced Ip to serve 60 days in jail and pay a \$5,000 fine, followed by 2 years of supervised release. Ip was also required to pay \$3,000 in restitution to the FWS. He was also convicted under New York state law of illegal commercialization of Snakehead fish, and sentenced to pay a \$5,000 fine. Ip's problems continued in Canada where he pleaded guilty to two charges under the Canadian Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act for illegally exporting Snakehead fish to the United States and illegally transporting Snakehead fish from Ontario to Manitoba. Ip's company, Lucky Aquarium, also pleaded guilty to four counts under the Ontario Fish and Wildlife Conservation Act of 1997 for illegally selling Snakehead fish. Lucky Aquarium was ordered to pay a total of \$75,030 in penalties with an additional \$1,250 to be paid for the publication of notices that warn of the dangers of invasive species and outline the potential penalties for those who violate the law. The company was put on probation for a 2-year term and required to meet stringent requirements for reporting imports, exports, and sales of fish to Environment Canada and the Ontario Ministry of Natural Resources. *See* Press Release, U.S. Attorney's Office, W. Dist. of N.Y., Ontario Fish Dealer Sentenced for Violating the Lacey Act (Nov. 13, 2012), available at <http://www.justice.gov/sites/default/files/usao-wdny/legacy/2013/02/27/Ip2.pdf>.
- One of the few plant cases that has been prosecuted occurred in 2012, when four defendants were sentenced after previously pleading guilty to conspiracy violations under 18 U.S.C. § 371 for the illegal transportation and sale in interstate commerce of a species of citrus plant that has been under quarantine in Florida for many years. In March 2011 Department of Agriculture inspectors discovered that Calomondin, a small Asian citrus tree and known carrier of both Citrus Canker Disease and the Citrus Greening Disease, was being sold from nurseries in Ohio and Illinois. Those plants were traced back to Allied Growers (Allied) in Fort Lauderdale, owned and operated by Dale Leblang and David Peskind. Valico Nurseries (owned and operated by Randall Linkous and his daughter, Andrea Moreira) provided the plants to Allied. All four defendants were aware of the quarantine and took various steps to conceal the true identity of the plants, including falsely labeling the plants when they were shipped out of Florida. Linkous was sentenced to serve a one-year term of probation, to include 6 months of home confinement. Linkous also had to perform 100 hours of community service and was prohibited from being involved with the sale of plants without permission from the court. Moreira received a 1-year term of probation, was required to perform 50 hours of community service, and was subjected to a similar employment restriction. Defendants Leblang and Peskind were each ordered to serve 1-year terms of probation, but were

not placed under employment restrictions or ordered to perform community service in light of their cooperation in the investigation. *See* Press Release, U.S. Attorney's Office, S. Dist. of Fla., Citrus Quarantine Violators Sentenced by Court (July 30, 2012), available at <http://www.justice.gov/usao/fls/PressReleases/2012/120730-01.html>.

- In 2014 Joel Rakower and his company, Transship Discounts Ltd., were sentenced for Lacey Act violations related to mislabeling imported piranhas. The defendants purchased piranhas from a Hong Kong tropical fish supplier and imported them to Queens, New York. Due to their extremely aggressive and territorial nature, piranhas are either banned or regulated in 25 states, making them illegal to own or sell. As an injurious species, they could pose a serious risk if they escaped into native water systems, potentially damaging ecosystems through aggressive predation or injuring people or animals. In March 2011, shortly after New York City prohibited possession of piranhas, Rakower instructed his foreign supplier to falsely label the piranhas on packing lists as silver tetras, a common aquarium fish. In 2011 and 2012, Transship submitted packing lists to the FWS containing false identifications for 39,548 piranhas, worth approximately \$37,376, which Transship then sold to fish retailers in several states. The court sentenced Transship to pay a \$35,000 fine and \$35,000 in restitution. The company was also required to complete a 2-year term of probation. Rakower received a 3-year term of probation and paid a \$5,000 fine. *See* Press Release, Dep't of Justice, Tropical Fish Importer Pleads Guilty in New York Federal Court to Piranha Import Violations (Jan. 29, 2014), available at <http://www.justice.gov/opa/pr/tropical-fish-importer-pleads-guilty-new-york-federal-court-piranha-import-violations>.
- American Pallet Recycling (APR) and company owner Raymond Viola pleaded guilty to charges stemming from the improper treatment of wood pallets. Viola was the president and owner of APR between March 1, 2007, and January 5, 2011. He pleaded guilty to a violation of the Plant Protection Act, and the company pleaded guilty to a false statement violation. APR is engaged in the business of building, repairing, and selling wooden pallets used in the national and international shipment of commercial goods. Pallets such as those manufactured and recycled by APR are the most common type of wood packaging material (WPM). WPM is omnipresent in international trade due to its use in storing and preventing damage to commodities. WPM is also a recognized pathway for the introduction and spread of plant pests. Highly destructive wood borers and beetles have been introduced into countries through the importation of untreated WPM. During the 2007 to 2011 period, APR falsely represented (using counterfeit stencils) that pallets sold by the company had been heat treated in compliance with International Plant Protection Convention standards. Viola violated the Plant Protection Act for his involvement in the use of these counterfeit stencils. APR was fined \$100,000 and Viola was fined \$1,000 and ordered to serve 3 years of probation. *See* Press Release, U.S. Dep't of Justice, Pallett Recycling Co. to Pay \$100,000 Fine and Former Owner Sentenced for Env'tl. Crime (Mar. 12, 2015).

VI. Conclusion

The Lacey Act continues to be the best avenue for a successful prosecution of any invasive/injurious species problem. The CWA may not be the best statute to bring a prosecution for AIS, absent some unique facts. U.S. Attorneys' offices will likely see more of these cases in the future as importers, driven by financial gain, bring more and more harmful species into the United States. It is fortunate that Major Lacey is not alive to see the destruction wrought by these harmful species, but he would be heartened to know that his creation continues to serve the public for the purposes he intended. ❖

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More Than “Just” Paperwork Violations: Combating IUU Fishing Through Enforcement of Seafood Traceability Schemes

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I. Introduction

Last December accounts of the Sea Shepherd’s ship, *Bob Barker*, pursuing the notorious illegal fishing vessel, *Thunder*, around the Southern Ocean captured public attention and brought renewed awareness to illegal, unreported, and unregulated (IUU) fishing. At the time of this writing, the pursuit of the *Thunder* has been ongoing for more than 3 months and resulted in Nigeria deleting the vessel from its registry, rendering the *Thunder* stateless. Another Sea Shepherd vessel, the *Sam Simon*, retrieved more than 72 kilometers of fishing gear abandoned by the *Thunder* and returned over 1,400 fish to the sea. *Sea Shepherd Hands-Over Evidence of Thunder’s Illegal Fishing to Authorities in Mauritius*, SEA SHEPHERD (Feb. 26, 2015), available at <http://www.seashepherd.org/news-and-media/2015/02/26/sea-shepherd->

[hands-over-evidence-of-thunders-illegal-fishing-to-authorities-in-mauritius-1671](#). The *Thunder*, the subject of a 2013 Interpol purple notice, was first identified for IUU fishing by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) in 2006. But, like many of the most egregious perpetrators of IUU fishing, it continues to operate, using the vastness of the high seas and frequent changes in name and flag to avoid detection and enforcement. See *Sea Shepherd Confronts Illegal Antarctic Poaching Vessel*, DAILY MAIL (Dec. 18, 2014), available at <http://www.dailymail.co.uk/wires/afp/article-2878706/Sea-Shepherd-confronts-illegal-Antarctic-poaching-vessel.html>; *Countries Unite to Identify Illegal Fishing Vessel via INTERPOL*, INTERPOL (Dec. 5, 2013); available at <http://www.interpol.int/News-and-media/News/2013/PR152>.

IUU fishing has been a focus of discussion in the international environmental community for more than two decades due to the significant threat it poses to the sustainability of global fish stocks, the viability of legitimate commercial fishing interests, and the food security of, particularly, developing nations. More recently, there has also been increased awareness of the connection between IUU fishing and other kinds of illegal activity that may be conducted at sea, including human trafficking. As the story of the *Thunder* illustrates, efforts to address IUU fishing through at-sea interdiction and the exercise of flag State jurisdiction continue, but over the past few years, regional fisheries management organizations (RFMOs), environmental nongovernmental organizations, fishermen, retailers, the United Nations Food and Agriculture Organization (FAO), and others (including, most recently, a U.S. Presidential Task Force) are considering different approaches. The overarching goals of all these efforts is to deny access to global markets to illegally-harvested fish, and thereby remove the economic incentive for IUU operators to continue their illegal activities. But how can we ensure that the fish and fish products that enter global trade were legally caught? One answer is the expanded use of traceability schemes.

As we look to expand the use of such schemes, it is worth examining how the existing schemes work and how they are used to combat IUU fishing. This article will look first at the legal frameworks underlying two existing catch documentation schemes and, in particular, how they can be used to prevent trade in IUU fish. Second, we will look at the forfeiture process used to address violations of documentation scheme requirements. Finally, we will discuss some examples, focusing on cases involving the catch documentation scheme adopted by the CCAMLR for Antarctic and Patagonian toothfish.

II. Illegal, unreported, and unregulated fishing

Over time, the phrase “IUU fishing” has been used to cover a multitude of illegal practices and defined in divergent ways. This inconsistent usage stems, at least in part, from the fact that no authoritative definition of IUU fishing has been adopted by the international community, which has instead settled on a list of the types of fishing activities that may be considered IUU fishing. FOOD AND AGRIC. ORG., UNITED NATIONS, FAO INTERNATIONAL PLAN OF ACTION TO PREVENT, DETER AND ELIMINATE ILLEGAL, UNREPORTED AND UNREGULATED FISHING 3 (2001), available at <http://www.fao.org/docrep/003/y1224e/y1224e00.htm>. While helpful for guiding the development of comprehensive fishery management plans, broad examples of IUU fishing activities, especially those constituting unreported and unregulated fishing, are not specific enough to be useful in the context of an enforcement discussion. Therefore, for the purposes of this article, the term IUU fishing will be used solely to describe fishing activities that violate laws or regulations, including particularly those implementing measures adopted by RFMOs for the conservation and management of fisheries under their purview.

Initially, international efforts to combat IUU fishing focused on control of vessels, including vessels operating on the high seas. For example, the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, adopted by the FAO in 1993, requires parties to “take such measures as may be necessary to ensure that fishing vessels entitled to fly [their] flag do not engage in any activity that undermines the effectiveness of

international conservation and management measures,” including those adopted by RFMOs of which they are not a member or a cooperating non-member. FOOD AND AGRIC. ORG., UNITED NATIONS, AGREEMENT TO PROMOTE COMPLIANCE WITH INTERNATIONAL CONSERVATION AND MANAGEMENT MEASURES BY FISHING VESSELS ON THE HIGH SEAS 4 (1995). Despite such efforts, those who engage in IUU fishing continue to find new ways to operate, and IUU fish and fish products continue to flow into the global market.

The persistence of the IUU fishing problem has led the international community to new approaches to address it, including approaches focused not on controlling harvesting activities, but rather on preventing IUU fish from being landed and entering the stream of commerce. For example, RFMOs have compiled lists of vessels that engaged in IUU fishing and require members and cooperating non-members to deny listed vessels the use of their ports and to prohibit the importation of fish harvested by such vessels. *See, e.g.*, 50 C.F.R. §§ 300.300–300.304 (2015); CONSERVATION MEASURE 10-07: SCHEME TO PROMOTE COMPLIANCE BY NON-CONTRACTING PARTY VESSELS WITH CCAMLR CONSERVATION MEASURES 6 (2009), available at <http://www.ccamlr.org/sites/drupal.ccamlr.org/files//10-07.pdf>. In 2009 the FAO adopted the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, which requires parties to develop port inspection regimes and, among other things, to deny IUU vessels authorization to enter port. Because we import more than 90 percent of the seafood consumed in the United States, FISHWATCH U.S. SEAFOOD FACTS, available at http://www.fishwatch.gov/wild_seafood/outside_the_us.html, these initiatives have received a lot of attention domestically, including in Congress, which introduced several legislative proposals to address the issue. Illegal, Unreported and Unregulated Fishing Enforcement Act of 2014, H.R. 774, 114th Cong. (2015); International Fisheries Stewardship and Enforcement Act, S. 269, 113th Cong. (2013); Pirate Fishing Elimination Act, S. 267, 113th Cong. (2013).

While there has been little action on recent legislative proposals to address IUU fishing, other initiatives are moving forward. For example, in June 2014 President Obama established a Presidential Task Force on Combating Illegal, Unreported and Unregulated Fishing and Seafood Fraud, noting that IUU fishing “continues to undermine the economic and environmental sustainability of fisheries and fish stocks, both in the United States and around the world. Global losses attributable to the black market from IUU fishing are estimated to be \$10-23 billion annually” Memorandum from the Office of the Press Sec’y, The White House, to the Heads of Exec. Departments and Agencies (June 17, 2014), available at <http://www.whitehouse.gov/the-press-office/2014/06/17/presidential-memorandum-comprehensive-framework-combat-illegal-unreported>. In December 2014 the Presidential Task Force published “recommendations for the implementation of a comprehensive framework of integrated programs to combat IUU fishing and seafood fraud that emphasizes areas of greatest need.” Recommendations of the Presidential Task Force on Combating Illegal, Unreported and Unregulated Fishing and Seafood Fraud, 79 Fed. Reg. 75536, 75537 (Dec. 18, 2014). Several of those recommendations relate to strengthening the ability of federal agencies to prevent IUU fish and fish products from entering the U.S. market, and two relate specifically to the development “of a risk-based traceability program to track seafood from point of harvest to entry into the U.S. commerce.” *Id.* at 75541.

III. International fisheries management

The vast majority of high seas, highly migratory, and straddling fish stocks are now managed internationally through RFMOs, established by treaties that have the competence to adopt measures to conserve and manage fish stocks within a defined geographic area. See http://www.nmfs.noaa.gov/ia/agreements/regional_agreements/intlagree.html for an interactive map listing most RFMOs. The measures adopted by RFMOs are legally binding on the member nations as well as on nations with cooperating, non-contracting party or cooperating non-member (CNCP/CNM) status. Each member nation, or CNCP/CNM, must implement the adopted measures through their own domestic laws, making them applicable to their flagged-vessels, nationals, and other vessels or persons subject to their jurisdiction.

Most RFMOs have measures in place to regulate the harvesting of fish (for example, authorized vessel lists, quotas on how much fish may be harvested, minimum size requirements, time/area closures, gear restrictions and gear modification requirements to prevent bycatch of protected species, etc.). These organizations have also adopted a variety of monitoring, control, and surveillance measures under which member and CNCP/CNM countries monitor compliance. These can include satellite-based vessel monitoring systems (VMS), observer and port inspection requirements, controls on transshipment, and schemes for joint international at-sea inspections. FOOD AND AGRIC. ORG., UNITED NATIONS, FAO INTERNATIONAL PLAN OF ACTION TO PREVENT, DETER AND ELIMINATE ILLEGAL, UNREPORTED AND UNREGULATED FISHING 3 (2001), available at <http://www.fao.org/docrep/003/y1224e/y1224e00.htm>.

These RFMO measures are all limited in their effectiveness in combating IUU fishing by the fact that, to a large extent, they are only applicable to member and CNCP/CNM nations. If those nations fail to fully implement the measures with respect to their vessels and nationals, or to take appropriate enforcement action when violations are found, their effectiveness is significantly diminished. Some member and CNCP/CNM nations lack the capacity, or the political will, to effectively monitor their vessels and nationals and to take appropriate enforcement action. FOOD AND AGRIC. ORG., UNITED NATIONS, PERFORMANCE REVIEWS BY REGIONAL FISHERY BODIES: INTRODUCTION, SUMMARIES, SYNTHESIS AND BEST PRACTICES, VOLUME I: CCAMLR, CCSBT, ICCAT, IOTC, NAFO, NASCO, NEAFC 2 (2012), available at <http://www.fao.org/docrep/015/i2637e/i2637e00.pdf>. In addition, many known IUU fishing vessels are flagged to nations that operate open vessel registries (meaning that they allow vessel registration by entities or individuals over whom they have no jurisdiction, sometimes referred to as “flags of convenience”). Some are without nationality. This leaves a gap in flag State control for those engaged in IUU fishing to sail through.

A few RFMOs have sought to address the gap by taking action to prevent the trade in IUU fish and fish products through the establishment of documentation schemes that track fish from the point of harvest through final import for consumption. Every step along the way is documented and, where appropriate, validated by government officials. The information in the catch document can be verified, and with some certainty, the legality of the fish can be determined by comparing it to authorized vessel lists, inspection and observer reports, catch and VMS data, fishery closure dates, and other information collected by the RFMO. The idea is that, especially for high-value species that are particularly attractive to IUU fishers, limiting international trade to properly-documented fish will deny access to the IUU fish and fish products market and reduce the economic incentive for IUU fishers to continue their illegal activities. Catch documentation also enables an importing nation to deny entry, or take other enforcement action, if the documentation shows, for example, that fish were harvested after the quota had been reached or by a vessel that was not complying with VMS requirements or lacked authorization. The United States is a member of two RFMOs—CCAMLR and the International Commission for the Conservation of Atlantic Tunas (ICCAT)—that adopted catch documentation schemes for Antarctic and Patagonian toothfish and Atlantic Bluefin Tuna, respectively. See COMMISSION FOR THE CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES, available at <http://www.ccamlr.org/en/compliance/catch-documentation-scheme-cds>; ICCAT, CICTA, CICAA, available at <http://www.iccat.int/en/BCD.asp>.

IV. Existing catch documentation schemes and U.S. implementing laws

Although many RFMOs are discussing the expansion of existing catch documentation schemes (CDS) or the adoption of new schemes, currently only two such schemes have been adopted by an RFMO of which the United States is a member—the CDS adopted by CCAMLR for Antarctic and Patagonian toothfish (marketed in the United States as Chilean Sea Bass) and the Atlantic Bluefin tuna catch documentation (BCD) scheme adopted by ICCAT. As slow-growing apex predator species, both toothfish and Atlantic Bluefin tuna are particularly susceptible to the impacts of IUU fishing and, as high-dollar value species, pose an attractive target catch for IUU fishers.

ICCAT manages tuna and tuna-like species, such as swordfish and marlin, in the Atlantic Ocean and its adjacent seas. The United States implements conservation and management measures adopted by ICCAT under the dual authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), 16 U.S.C. §§ 1801–1891d, and the Atlantic Tunas Convention Act of 1975 (ATCA), 16 U.S.C. §§ 971–971k. ATCA prohibits any person subject to the jurisdiction of the United States from shipping, transporting, purchasing, selling, offering for sale, importing, exporting, or having “in custody, possession, or control any fish which he knows, or should have known, were taken or retained contrary to the recommendations of” the International Commission for the Conservation of Atlantic Tunas. 16 U.S.C. § 971e(a)(2) (2015). Furthermore, regulations promulgated under ATCA, the Magnuson-Stevens Act, and 50 C.F.R. § 300.189(f), prohibit the importation of Atlantic Bluefin tuna without “an original, completed, approved, [and] validated” Bluefin Catch Document, *id.* § 300.185 (a)(2), with a unique number, information about the harvest (vessel name and ICCAT record number, individual quota used, harvest date, area of catch, gear used, number of fish, total weight, and average weight), landing and trade, validated by government officials. *See* INT’L COMM’N FOR THE CONSERVATION OF ATL. TUNAS, RECOMMENDATION BY ICCAT AMENDING RECOMMENDATION 09-11 ON AN ICCAT BLUEFIN TUNA CATCH DOCUMENTATION PROGRAM, available at <https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-20-e.pdf>. The regulations define import as

to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, *whether or not such landing, bringing or introduction constitutes an importation within the meaning of the customs laws of the United States*[,]

except that the definition does not apply to fish caught in the exclusive economic zone or by a vessel of the United States. 50 C.F.R. § 300.181 (2015) (emphasis added).

No criminal or civil judicial sanctions are available for violations related to the CDS, but civil administrative penalties of up to \$140,000 per count (as adjusted for inflation pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990) are available. *See* 16 U.S.C. §§ 971e, 1858 (2015); Federal Civil Penalties Inflation Adjustment Act of 1990, Pub. L. No. 101-410, § 2, 104 Stat. 890, 890 (1990); Omnibus Consolidated Rescissions and Appropriations Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321, 1321 (1996); Civil Monetary Penalties; Adjustment for Inflation, 77 Fed. Reg. 72915, 72917 (Dec. 7, 2012). In addition, all fish taken or retained in violation of the ATCA and the Magnuson-Stevens Act are subject to civil or administrative forfeiture under 16 U.S.C. §§ 971e(f), 1860, and fish imported in violation of import requirements are subject to forfeiture under 19 U.S.C. § 1595a. Furthermore, violations involving importation in violation of BCD requirements can form the basis for criminal charges under Title 18.

The United States implements conservation and management measures for Antarctic and Patagonian toothfish adopted by CCAMLR under the authority of the Antarctic Marine Living Resources Convention Act (AMLRCA), 16 U.S.C. §§ 2431–2444. Under AMLRCA, it is unlawful for any person to:

ship, transport, offer for sale, sell, purchase, import, export, or have custody, control or possession of, any Antarctic marine living resource (or part or product thereof) which he knows, or reasonably should have known, was harvested in violation of a conservation measure in force with respect to the United States

Id. § 2435(3). CCAMLR adopted a CDS for toothfish in 2000. U.S. regulations prohibit the importation of toothfish without a complete and validated electronic Dissostichus catch document (DCD). 50 C.F.R. §§ 300.107(c), 300.117(b) (2015). Each DCD has a unique number and includes detailed information about the harvest, transshipment, landing, export and reexport of the fish, vessel number and license number, International Maritime Organization number, date and location of harvest, and amount and form of fish, validated by a government official. COMMISSION FOR THE CONSERVATION OF ANTARCTIC

MARINE LIVING RESOURCES, CONSERVATION MEASURE 10-05 3 (2014), *available at* <https://www.ccamlr.org/en/measure-10-05-2014>. AMLRCA defines import broadly as “to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the United States, *whether or not such landing constitutes an importation within the meaning of the customs laws of the United States.*” 16 U.S.C. § 2432(7) (2015) (emphasis added). Criminal sanctions are not available directly under AMLRCA for violations involving the catch documentation scheme, and the statute only authorizes civil administrative penalties of up to \$11,000. *Id.* § 2439; Civil Monetary Penalties; Adjustment for Inflation, 77 Fed. Reg. at 72917. However, the statute does authorize the forfeiture of any Antarctic marine living resource (AMLR) (or part or product thereof) with respect to which an act prohibited by statute is committed. 16 U.S.C. § 2439(d)(1) (2015). In addition, violations of catch documentation requirements can form the basis for criminal charges under Title 18.

Toothfish is consistently priced at more than \$10 per pound, and a single shipment can be worth several hundred thousand dollars. More information about these statistics may be found at <http://www.fis.com/fis/marketprices/>. Bluefin tuna are also among the most valuable fish species in the world, with a single fish typically selling for thousands of dollars. For more information, visit <http://www.theatlantic.com/international/archive/2014/01/sushinomics-how-bluefin-tuna-became-a-million-dollar-fish/282826/>. Because of the money to be made from IUU fishing and illegal trade relative to the maximum civil penalties authorized under the relevant statutes, forfeiture is a critical tool to ensure that the consequences of such fishing are more than just a cost of doing business.

Fish imported in violation of catch documentation requirements may or may not have been harvested illegally. However, the provision of false or incomplete information, or the failure to provide required documentation at all, may indicate an attempt to conceal the illegality of the harvest. Dealers seeking to import frozen toothfish must submit an application for preapproval, including DCD number, 15 working days prior to the anticipated entry. All shipments of frozen toothfish must be accompanied by a certificate of preapproval issued by NOAA. Imports of fresh toothfish, which are uncommon, must be accompanied by a DCD. Similarly, all imports of Atlantic Bluefin tuna must be accompanied by a BCD. Even when required information is simply provided late, the Government is deprived of the opportunity to use the catch documentation to make a determination on the legality of the harvest prior to import, thus allowing the fish or fish products to enter the stream of commerce. This delay undermines the effectiveness of the CDS and jeopardizes the ability of the United States to meet its international obligations under the scheme.

V. Import violations

The FAO estimates that more than 90 percent of global fish stocks are either fully fished or overfished, although the numbers show a positive trend toward more sustainable fisheries. *See* FOOD AND AGRICULTURE ORGANIZATION, UNITED NATIONS, THE STATE OF WORLD FISHERIES AND AQUACULTURE 7 (2014), *available at* <http://www.fao.org/3/a-i3720e.pdf>. IUU fishing undermines the ability of coastal nations and RFMOs to continue that positive trend. As one of the biggest seafood markets in the world, importing \$18 billion in seafood in 2013, the United States has a strong incentive to act to prevent the importation of IUU fish and fish products. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEP'T OF COMMERCE, IMPORTS AND EXPORTS OF FISHERY PRODUCTS ANNUAL SUMMARY 1 (2013), *available at* <http://www.st.nmfs.noaa.gov/Assets/commercial/trade/Trade2013.pdf>. As a member of a number of RFMOs (including, for example, CCAMLR, ICCAT, the Inter-American Tropical Tuna Commission (IATTC), the Northwest Atlantic Fisheries Organization, and the Western and Central Pacific Fisheries Commission), the United States also has an obligation to prevent the importation of fish and fish products harvested in contravention of the measures adopted by those organizations.

Unlike many nations in the world, the United States has laws in place that specifically address the importation of fish that have been harvested illegally in an area outside national jurisdiction, regardless of the nationality of the vessel or individual who harvested the fish. These statutes include the Magnuson-Stevens Act, 16 U.S.C. § 1857(1)(Q); the Lacey Act, 16 U.S.C. §§ 3371–3378; and statutes implementing the various RFMO Conventions to which the United States is a party. *See, e.g.*, Tuna Conventions Act of 1950, 16 U.S.C. §§ 951–962 (2015) (implementing the 1949 Convention for the Establishment of an International Commission for the Scientific Investigation of Tuna and establishing the IATTC); Atlantic Tunas Convention Act of 1975, 16 U.S.C. §§ 971–971k (2015) (implementing the ICCAT Convention); Antarctic Marine Living Resources Convention Act, 16 U.S.C. §§ 2431–2444 (2015) (implementing the CCAMLR Convention); 16 U.S.C. §§ 5601–5612 (2015) (implementing the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries); 16 U.S.C. §§ 6901–6910 (2015) (implementing the Convention on the Conservation and Management of the Highly Migratory Fish Stocks in the Western and Central Pacific Ocean). Of these laws, federal prosecutors are probably most familiar with the Lacey Act, which is the primary federal statute addressing trafficking in illegally harvested fish and wildlife.

The Lacey Act prohibits the import, export, transport, sale, receipt, acquisition, or purchase in interstate or foreign commerce of any fish taken, possessed, transported, or sold in violation of any law, treaty, or regulation of the United States, or in violation of any foreign law. 16 U.S.C. § 3372(a) (2015). This prohibition creates a two-step process to establishing a Lacey Act violation involving the importation of illegally harvested fish: (1) proving the underlying harvesting violation, and, far easier, (2) proving the import. Where a violation of the Lacey Act can be proved, there are effective enforcement tools, including criminal sanctions and the authority to forfeit any illegally imported fish “notwithstanding any culpability requirements for civil penalty assessment or criminal prosecution included in section 3373” *Id.* § 3374. In other words, the Lacey Act’s forfeiture authority, with respect to fish that was imported illegally, is not tied to a successful civil or criminal prosecution. Civil administrative penalties authorized under the Lacey Act are capped at a low \$11,000 per count, an amount that is disproportionate to the value of many species of imported seafood. *See id.* §§ 3373, 3374.

The Lacey Act has been used successfully in a number of IUU fishing cases. Nevertheless, an effective Lacey Act prosecution can be complicated not only by the two-step process, but also by the need to understand foreign law and obtain necessary evidence from foreign governments. Application of the Lacey Act to cases involving the illegal importation of fish and fish products is further limited by the fact that violations of conservation and management measures implemented under the Magnuson-Stevens Act, Tuna Conventions Act, or ATCA, cannot serve as the underlying violation in a Lacey Act case. *Id.* § 3377. Because Atlantic highly migratory species, including Bluefin tuna, are managed under the dual authority of the Magnuson-Stevens Act and ATCA, the Lacey Act cannot be used to address either the importation of illegally harvested Atlantic Bluefin tuna or violations of the regulations implementing the BCD scheme. However, the exceptions in § 3377 do not apply to the Lacey Act’s prohibitions on false labeling. *See id.* § 3372. The Lacey Act has been successfully used in criminal prosecutions involving violations of U.S. laws implementing CCAMLR’s CDS because, unlike ATCA violations and most substantive U.S. domestic fishing violations, they are not exempt from the application of the Act.

By far, the best-known Lacey Act case involving the importation of IUU fish is *United States v. Arnold Bengis*, 631 F.3d 33 (2d Cir. 2011). Arnold Bengis was the Managing Director and Chairman of Hout Bay Fishing Industries, Ltd. in Cape Town, South Africa. David Bengis and Jeffrey Noll were the presidents of two U.S. corporations that imported, processed, packed, and distributed the fish in the United States on behalf of Hout Bay. Between 1987 and 2001, the three of them engaged in a complex scheme in which they paid local fishermen in South Africa to harvest rock lobster in excess of quotas, submitted false export documents to the government of South Africa, and imported the illegally harvested lobsters to the United States. The government of South Africa prosecuted Hout Bay, but determined Arnold Bengis, David Bengis, and Jeffrey Noll to be “beyond the reach of South African authorities.” *Id.*

at 36. Instead, it cooperated with U.S. authorities in their investigation and prosecution. In 2004 Arnold Bengis and Jeffrey Noll pleaded guilty to conspiracy to violate the Lacey Act and commit smuggling (in violation of 18 U.S.C. § 371) and substantive violations of the Lacey Act. David Bengis pleaded guilty to the conspiracy charge only. The three were sentenced to various terms of imprisonment and together forfeited \$13.3 million to the United States. Ultimately, in 2013, the defendants were also ordered to pay \$29,495,800 in restitution to the government of South Africa.

Another case, *United States v. McNab*, 331 F.3d 1228 (11th Cir. 2003), involved four members of a smuggling ring that were prosecuted for, among other things, importing spiny lobster that was harvested, possessed, or transported into the United States, in violation of Honduran law. McNab and two codefendants were sentenced to 97 months' imprisonment; the fourth received a 24-month sentence. *Id.* at 1235.

In addition to the Lacey Act, the treaty-implementing statutes for the various RFMOs, of which the United States is a member, also provide enforcement tools to address imports of IUU fish, including authorization of civil administrative penalties and forfeiture. *See, e.g.*, Tuna Conventions Act, 16 U.S.C. § 957(a) (2015); ATCA, 16 U.S.C. § 971e(e), (f) (2015); AMLRCA, 16 U.S.C. §§ 2435, 2437, 2439 (2015); Northwest Atlantic Fisheries Convention Act, 16 U.S.C. § 5606 (2015); 16 U.S.C. §§ 6905, 6906 (2015). *See also* Eastern Pacific Tuna Licensing Act of 1984, 16 U.S.C. §§ 972f, 972g (2015). For those RFMOs that have adopted CDS, enforcement of the regulations implementing those schemes provides an avenue for preventing the importation of IUU fish into the United States without having to prove the illegality of the harvest and, in some cases, with proof of a much narrower set of factual elements.

VI. Forfeiture in import cases

A primary goal of illegal importation prosecutions, whether involving IUU fish and fish products or endangered species parts, is to deter trafficking and eliminate the market demand that drives poaching. As described above, there is a significant amount of money to be made from the importation of IUU fish and fish products, and the risks are relatively low. Unlike endangered species parts, or contraband like narcotics, there are very few circumstances in which the taking, harvest, or import of fish is per se illegal. For wild-caught fish, legality is inextricably linked to the “who, what, where, when, and how” of harvest. That makes violations extremely difficult to detect, a problem that increases exponentially when the fish enter the stream of commerce before the violation is detected. For example, once a fish has been processed, it can be impossible to even determine its species without forensic testing. Because of the low civil penalties available under some statutes, particularly under the Lacey Act and AMLRCA, the limited availability of criminal penalties, and the high value of some seafood shipments, civil and administrative forfeiture—where it is available—is an important tool in effectively addressing IUU imports by depriving the violator of the economic benefit of the violation, deterring future violations, and helping to reduce the market for IUU fish.

While forfeiture of illegal fish and fish products is available under many of the statutes administered by NOAA, this section focuses on administrative forfeiture under the Lacey Act, ATCA, and AMLRCA. Forfeiture proceedings under these statutes may be initiated in addition to any other civil or criminal enforcement action that might be undertaken, or on its own. Civil (administrative or judicial) forfeiture of the fish pursuant to these statutes must be done in accordance with the terms of the Civil Asset Forfeiture Reform Act of 2000 (CAFRA), 18 U.S.C. §§ 981–987 (2015). CAFRA governs the administrative or judicial civil forfeiture of assets that are the proceeds of, or involved in, one or more violations of enumerated federal laws or regulations.

A. Specific forfeiture proceedings

Administrative forfeiture proceedings: Administrative forfeiture proceedings should be initiated once NOAA (or another agency with the requisite seizure authority) seizes any fish (or other property subject to seizure and forfeiture pursuant to 16 U.S.C. §§ 971e, 2439, or 3374) with a value of \$500,000 or less at the time of seizure. *See* 19 U.S.C. § 1607 (2015). Administrative forfeiture is accomplished by the sending of notice to all known potential claimants, within 60 days of the seizure, of the Government's intention to forfeit the property. If a property owner submits a timely claim to the seizing agency, the matter is forwarded to the Department of Justice for the initiation of civil forfeiture proceedings. If no claim is received, the agency may forfeit the seized property. 15 C.F.R. §§ 904.500–904.510 (2015). Administrative forfeiture is not available for seizures of property with a value greater than \$500,000. *See* 19 U.S.C. § 1607 (2015).

Civil judicial forfeiture proceedings: Where a seizure involves property valued at more than \$500,000, the Government must pursue civil or criminal judicial forfeiture in the first instance, and those proceedings are generally commenced within 150 days of the seizure. Where a party submits a claim in an administrative proceeding, the Government must either file a civil complaint for forfeiture or include the property in a criminal indictment no later than 90 days after the agency's receipt of the claim. 18 U.S.C. § 983(a)(3)(A) (2015). A civil forfeiture matter proceeds like any other civil case, with discovery, motions, and, ultimately, trial. To prevail, the Government must prove by a preponderance of evidence that the seized property is subject to forfeiture. In relation to IUU fishing and, more specifically, violations of AMLRCA, the Government must show that the seized property was an Antarctic marine living resource with respect to which an act prohibited by 16 U.S.C. § 2435 was committed. Similarly, under the Lacey Act, the Government must show that the fish was imported, exported, transported, sold, received, acquired, or purchased contrary to the provisions of 16 U.S.C. § 3372 or, under ATCA, that the fish was taken or retained in violation of 16 U.S.C. § 971e.

Criminal forfeiture proceedings: If a claim is received in an administrative forfeiture proceeding (or if administrative forfeiture is unavailable due to the value of the property), the Government may also initiate criminal forfeiture proceedings against the seized property by including a forfeiture allegation in a criminal indictment or complaint. *See* 18 U.S.C. § 983(a)(3)(B)(ii)(I) (2015). At the conclusion of the criminal trial against the person or party responsible for the violation giving rise to the forfeiture, the Government must prove to the finder of fact, by a preponderance of evidence, that the seized property is subject to forfeiture. If the Government is successful, notice is then sent to potential claimants (other than the recently-convicted defendant) that the Government intends to forfeit the seized property. At that point, a claimant or claimants may come forward and contest the forfeiture only on the grounds that they have an ownership interest in the seized property. The forfeitability of the seized property may not be relitigated. If the Government prevails in this ancillary proceeding, the property is ordered forfeited to the Government.

B. Defenses to forfeiture

In addition to arguing that the property is not subject to forfeiture, claimants in forfeiture cases have two primary defenses to forfeiture available to them: (1) the claimant is an innocent owner of the property, and (2) the forfeiture is constitutionally excessive, in violation of the Eighth Amendment.

Innocent ownership: CAFRA, in 18 U.S.C. § 983(d), provides that an innocent owner's interest in property shall not be forfeited under any civil forfeiture statute. An "innocent owner" is defined as an owner who "did not know of the conduct giving rise to forfeiture or, upon learning of the conduct giving rise to forfeiture, did all that reasonably could be expected under the circumstances to terminate such use of the property." 18 U.S.C. § 983(d) (2015). An important exception to the innocent owner defense,

however, is that no person may assert an innocent ownership interest in contraband or other property that is illegal to possess. Practically speaking, this exception swallows the rule in situations such as the forfeiture of Antarctic marine living resources, which may only be imported or possessed in the United States pursuant to the rules and regulations established under AMLRCA. Courts have held that the phrase “other property that it is illegal to possess” includes property that would otherwise be lawful to possess or import into the United States if imported pursuant to the prescribed laws or regulations. See *United States v. 144,774 Pounds of Blue King Crab*, 410 F.3d 1131, 1135 (9th Cir. 2005); *United States v. Gordon*, No. 11-CR-517, 2014 WL 5871201, at *3 (E.D.N.Y. Nov. 12, 2014); *Conservation Force v. Salazar*, 677 F. Supp. 2d 1203, 1207 (N.D. Cal. 2009); *United States v. 1866.75 Board Feet and 11 Doors and Casings, More or Less, of Dipteryx Panamensis Imported From Nicaragua*, 587 F. Supp. 2d 740, 750–51 (E.D. Va. 2008). In other words, importing property in a manner inconsistent with the law makes that property illegal to possess, thus prohibiting a claimant to that property from asserting an innocent ownership interest in the property.

Constitutionally excessive forfeiture: After property is found to be subject to forfeiture, a claimant may petition the court to determine whether the forfeiture was constitutionally excessive. In making the determination, the court compares the forfeiture to the gravity of the offense giving rise to the forfeiture. See 18 U.S.C. § 983(g) (2015). Much like the innocent ownership defense, however, most courts have found that forfeitures for violations of what are essentially customs laws are not constitutionally excessive, as they are more accurately characterized as “remedial” rather than “punitive.” Remedial forfeitures, the courts have held, fall outside the reach of the Excessive Fines Clause. See *United States v. \$273,969.04 in U.S. Currency*, 164 F.3d 462, 466 (9th Cir. 1999); *Conservation Force v. Salazar*, 677 F. Supp. 2d 1203, 1209 (N.D. Cal. 2009); *United States v. Approximately 1,170 Carats of Rough Diamonds*, No. 05-CV-5816, 2008 WL 2884387, at *12 (E.D.N.Y. July 23, 2008).

C. Policy considerations for forfeiture

The primary motivation of every government prosecutor is to do justice. In cases involving the importation of fish in violation of catch documentation requirements, the facts are usually relatively straightforward, leaving little question whether a violation occurred. However, there still remains the policy consideration of whether it is in the interests of justice to forfeit the fish associated with the violation. By allowing the import of fish without the required documentation and not forfeiting the associated fish, importers are incentivized to intentionally or negligently violate regulations in exchange for a substantial economic benefit. Strict liability forfeiture removes the economic benefit and motivates importers to follow laws and regulations designed to ensure the continued existence of the fish that are subject to catch documentation schemes (CDS).

VII. Case examples

There have been a number of criminal and civil cases brought for violations of CCAMLR’s CDS. The examples provided below reflect the range of approaches taken to prosecute cases and the range of outcomes obtained. Forfeiture of the illegally imported fish was an important component in each of these cases.

On May 10, 2013, Fish House Wholesalers, LLC, a federally permitted dealer in Miami, Florida, imported a shipment of approximately 10,880 kilograms of frozen Patagonian toothfish without obtaining preapproval from NOAA, as required under 50 C.F.R. § 300.114(a)(2). The DCD for 4,231 kilograms of the imported fish did not meet the requirements of the relevant conservation measure adopted by CCAMLR or U.S. regulations, specifically those requiring that all imports of frozen toothfish be accompanied by verifiable evidence that the harvesting vessel was reporting to CCAMLR’s centralized VMS system, for the duration of the trip, regardless of where the fish was harvested. In addition, the DCD was issued more than a year after the fish were harvested and did not identify the harvesting vessel, in

violation of CCAMLR requirements. Because the fish associated with the inaccurate DCD was in a different form (it had been processed into fillets, while the rest was whole fish), it was easily distinguishable from the rest of the shipment. That fish was seized, and Fish House Wholesalers (respondent) was issued a Notice of Violation and Assessment (NOVA), charging one count of violating AMLRCA and assessing an administrative penalty of \$5,000. Fish House Wholesalers did not respond to the NOVA, which became a final agency action on June 30, 2014. The respondent was also issued a Notice of Proposed Forfeiture seeking forfeiture of the \$50,000 in proceeds from the sale of the seized fish. It agreed to waive any claim, and the proceeds were forfeited to the United States on September 17, 2014.

In contrast to the administrative approach taken in *Fish House Wholesalers*, a criminal fine of \$10,000 was imposed at sentencing in *United States v. Pescanova*, No. 10-20526-CR-UNGARO (S.D. Fla. Feb. 9, 2011). The defendant corporation pleaded guilty to one count of violating the Lacey Act by importing toothfish accompanied by DCDs with missing and inaccurate information, in violation of AMLRCA and its implementing regulations. In the plea agreement, the defendant also agreed to the forfeiture of the illegally-imported fish or the proceeds therefrom, valued at \$1.2 million. *United States v. Approximately 97,781.00 Kilograms Gross Weight, More or Less, Of Frozen Toothfish (Dissostichus Spp.)*, Case No. 10-60438-CV-UNGARO (S.D. Fla., filed Mar. 24, 2010).

In another case involving Pescanova, *United States v. Pescanova*, Case No. 8:13-CV-65 (LEK/CFH) (E.D.N.Y. June 12, 2013), Pescanova was charged with exporting 9,600 pounds of frozen Patagonian toothfish to Canada in October 2010, without first completing an application for, and obtaining, the required validated reexport document issued by NOAA. When the Canadian Food Inspection Agency (CFIA) tested the toothfish, it was determined that the fish did not comply with CFIA's standards for mercury. As a result, the fish could not be sold for consumption in Canada. On December 15, 2010, Pescanova imported the fish back into the United States, again without submitting an application and obtaining the required preapproval from NOAA. The toothfish were seized by U.S. Customs and Border Protection officers. Pescanova entered into a consent decree with the United States, agreeing to pay a civil administrative penalty of \$22,000 to NOAA; a civil penalty of \$13,000 to the Department of Justice; and the administrative forfeiture of the \$96,013.76 obtained from the sale of the 9,600 pounds of fish. In addition, under the terms of the agreement, Pescanova and its employees are "permanently enjoined from importing, reimporting, exporting, or reexporting Patagonian toothfish, or any other Antarctic marine living resource (AMLR), unless it complies with the procedures" promulgated by CCAMLR and with the United States' implementing laws and regulations. Pescanova agreed that in the event it imports, reimports, exports, or reexports toothfish, or any other AMLR in violation of law or regulation, it will pay to the United States, upon the first violation, a civil contempt penalty of \$100 for each pound, or portion thereof, of toothfish, or any other AMLR it so imports or exports. For each successive violation, Pescanova will pay a contempt penalty of \$500 for each pound, or portion thereof, of toothfish or any other AMLR.

In *United States v. Estremar S.A.*, CR 06-567 (C.D. Cal. June 15, 2006), the defendant pleaded guilty to violating the Lacey Act by importing Patagonian toothfish that were taken, possessed, transported, or sold illegally in violation of AMLRCA, and that were falsely labeled. Seven shipments of toothfish were imported into Los Angeles, California; Seattle, Washington; and New Bedford, Massachusetts, accompanied by inaccurate DCDs, some of which provided false information about the weight of the fish and some of which included inaccurate harvest dates for the fish. The defendant was sentenced pursuant to the terms of the plea agreement, under which it agreed to pay a fine of \$75,000, to forfeit and/or abandon \$250,000 in toothfish and substitute assets associated with the violation, and to pay \$10,000 to CCAMLR. Also, under the terms of the plea agreement, the defendant agreed to submit to a 4-year probationary period, to participate in CCAMLR's electronic CDS as soon as possible (the electronic system was a voluntary pilot at that time), and to provide information to NOAA Fisheries Office of Law Enforcement. The defendant also agreed not to oppose the then-pending civil forfeiture action in

United States v. \$53,618 in U.S. Funds As A Substitute Res for Approximately 7.7 Tons of Patagonian Toothfish Seized from LA Cold Storage Company Bonded Warehouse, No. 05-07116-DDP (PLAX) (C.D. Cal., filed Sept. 30, 2005).

In 2004 Antonio Vidal Pego and Fadilur, S.A. knowingly attempted to import approximately 24,000 kilograms of toothfish from Singapore, taken and transported in violation of conservation and management measures adopted by CCAMLR and U.S. law, submitted a false record and account for fish intended to be imported from Singapore, and knowingly altered and made a false entry in a DCD. Defendant Fadilur, S.A. pleaded guilty to false labeling, importation of illegally possessed fish, and attempted sale of that fish, all in violation of the Lacey Act, and to obstruction of justice. Fadilur was sentenced to 4 years of probation, a fine of \$100,000, and restitution of \$1,600. *United States v. Pego et al.*, No. 10-205260-CR-UNGARO (S.D. Fla., filed Nov. 16, 2006). As part of the plea agreement, Fadilur also agreed to consent to the forfeiture of all of the currency and toothfish named as defendants in *United States v. \$1,920,735.33 et al.*, No. 05-1238 (ILG) (E.D.N.Y. filed Mar. 7, 2005), to cease all corporate activities, and dissolve as a business entity. Defendant Antonio Vidal Pego pleaded guilty to one count of obstruction of justice and was sentenced to 48 months of probation (during which he was required to cease all involvement in the toothfish industry), and was fined \$400,000.

VIII. Conclusion

There is no perfect tool to combat IUU fishing and no perfect solution. However, as traceability programs grow and expand, and become more sophisticated and fully electronic, it will become more and more difficult for IUU fish and fish products to find their way into legitimate streams of commerce. While a violation of a regulation dealing with catch documentation or traceability may appear to be “just” a paperwork violation, such a violation undermines the management regime that is designed to ensure sustainable fish stocks and conflicts with U.S. obligations under international law. By tracking fish and fish products from initial harvest all the way to final sale, we eliminate the shadows where those who engage in IUU fishing seek to hide. Commitment to these efforts will be a big step forward in the fight against IUU fishing. ❖

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Beyond the (Deepwater) Horizon: Possible Wildlife Criminal Charges for the Next Major Oil Spill

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I. Introduction

In April 2010 the explosion and sinking of the drilling rig, *Deepwater Horizon*, off the coast of Louisiana, killed 11 men and caused the largest oil spill in United States history, eventually discharging nearly 5 million barrels (over 200 million gallons) of crude oil into the Gulf of Mexico. Two and a half years later, in November 2012, BP Exploration and Production, Inc. (BPXP), the operator of the blown-out well, pleaded guilty in federal court in New Orleans to 11 felony counts of manslaughter, 1 misdemeanor count of negligent discharge of oil under the Clean Water Act, 1 misdemeanor count of unlawfully taking migratory birds under the Migratory Bird Treaty Act (MBTA), and 1 felony count of obstructing Congress based on the company's attempts to cover up the magnitude of the spill. In the plea agreement, BPXP agreed to pay \$4 billion in fines and other monetary penalties, including a record \$100 million criminal fine under the MBTA, and more than \$2 billion for remedial and restoration projects to be administered by the National Fish and Wildlife Foundation.

Notwithstanding the record fines and the huge sums directed to conservation goals, the BPXP plea agreement might have been even more far-reaching in at least one respect. Despite the spill's widespread and widely-publicized impacts on a broad spectrum of wildlife, as well as the oiling of several national wildlife refuges and a national seashore, the plea reflected BPXP's criminal liability for the spill's effects on wildlife primarily through a single count brought under the MBTA, which protects only migratory birds. Transocean and Halliburton later entered corporate guilty pleas in connection with the spill and its aftermath, and several individuals also were charged with manslaughter, pollution, and obstruction offenses. However, apart from the MBTA conviction for BPXP, no other wildlife charges were brought as a result of the blowout and spill.

The *Deepwater Horizon* prosecution therefore raises some questions for future prosecutions. Should wildlife investigators and prosecutors look beyond the MBTA when investigating and prosecuting individuals and organizations responsible for major oil spills? If so, what other criminal charges might be available to more fully and accurately reflect the scope of wildlife impacts caused by a spill? This article offers some preliminary answers to both these questions.

II. Why look beyond the MBTA?

The unfortunate but undeniable fact is that, in addition to killing migratory birds, major oil spills tend to impact a wide range of other wildlife and habitat. Over a thousand endangered sea turtles were collected during the *Deepwater Horizon* response, many of them coated in heavy crude oil from the Macondo well, and it is estimated that thousands more were never rescued or recovered. The 1989 *Exxon Valdez* spill, to cite another familiar example, is estimated to have killed 2,800 sea otters, 300 harbor seals, and as many as 22 killer whales. The MBTA, with its narrow focus on migratory birds, simply cannot adequately reflect or address those impacts.

Direct impacts on protected species, moreover, tell only part of the story. One of the most devastating consequences of an oil spill can be the impact on sensitive habitat and on the larger ecosystem, including creatures great and small. For example, Prince William Sound, the site of the *Exxon Valdez* spill, in addition to being home to sea otters and other federally protected species, also was home to an important herring fishery, which still has not recovered from the spill, more than 25 years later. Similarly, the *Deepwater Horizon* spill occurred in one of the country's richest and most economically productive marine and coastal environments, and the long-term effects on the Gulf of Mexico and its shorelines will not be fully known for some time. A number of ecologically sensitive areas were directly oiled, including several national wildlife refuges, wilderness areas, and the Gulf Islands National Seashore. Those areas, including some of the last undeveloped beaches in Mississippi, Alabama, and the Florida Panhandle, are home to an enormous variety of wildlife, from mollusks and other invertebrates, to nesting shorebirds and sea turtles, to marine and terrestrial mammals.

Fortunately, in addition to the MBTA, a number of other federal criminal statutes protect wildlife, four of which are discussed in this article: (1) the Endangered Species Act, (2) the Marine Mammal Protection Act, (3) the National Wildlife Refuge System Administration Act, and (4) the National Parks Organic Act. None of these statutes is a perfect fit in every case. In fact, each has some significant shortcoming or potential obstacle to prosecution in the oil spill context, as discussed below. Moreover, to the authors' knowledge, none of these statutes has been used previously to criminally prosecute those responsible for a major oil spill. Nevertheless, these statutes, and others like them, are well established in other contexts, and they are potentially useful tools in the investigation and prosecution of oil spills. In an appropriate case, one or more of them might allow criminal charges that more accurately reflect an oil spill's full impact on wildlife.

III. Statutes protecting particular wildlife

At least two broad categories of environmental statutes may be relevant to wildlife harmed by an oil spill: statutes that protect particular species or groups of plants or animals, and statutes that protect particular places or habitats where wildlife is found.

The first category includes one of the best known wildlife protection statutes, the Endangered Species Act. It also includes the lesser known, but in some ways similar, Marine Mammal Protection Act. (Depending on the circumstances, other statutes—such as the Bald and Golden Eagle Protection Act, for example—also might apply.)

A. Endangered Species Act

The Endangered Species Act (ESA), 16 U.S.C. §§ 1531–1544, provides that any person who knowingly kills or otherwise “takes” an endangered animal within U.S. territory or on the high seas is guilty of a criminal offense. 16 U.S.C. §§ 1538(a)(1)(B)–(C), 1540(b)(1) (2015); 50 C.F.R. § 17.21(c) (2015). The take of an endangered animal is a Class A misdemeanor, with maximum statutory penalties of 1 year in prison and a fine of up to \$100,000 for individual defendants, \$200,000 for organizations, or twice the gain or loss resulting from the offense. 16 U.S.C. § 1540(b)(1) (2015); 18 U.S.C. § 3571 (2015). The take prohibition is also generally extended to threatened species by regulation. 50 C.F.R. § 17.31(a) (2015). The take of a threatened animal is a Class B misdemeanor, with a maximum sentence of 6 months’ imprisonment and a fine of \$25,000 for individuals or organizations, or twice the gain or loss. 16 U.S.C. § 1540(b)(1) (2015); 18 U.S.C. § 3571 (2015). Any number of threatened and endangered species could be at risk from major oil spills, including species of sea turtles, whales, beach mice, and coral. (A complete list of protected animal and plant species can be found at 50 C.F.R. §§ 17.11 and 17.12.) Because these species are in peril, harm from an oil spill is particularly worrisome, and criminal charges may be justified on appropriate facts. However, a few issues should be considered, including one significant obstacle to prosecution of unintentional oil spills.

Mental state: The principal legal obstacle to ESA criminal charges in the oil spill context is the mental state required by the statute. An ESA criminal charge, although a misdemeanor, requires “knowing” conduct by the defendant. 16 U.S.C. § 1540(b)(1) (2015); *see United States v. Clavette*, 135 F.3d 1308, 1311 (9th Cir. 1998); *United States v. Ivey*, 949 F.2d 759, 766 (5th Cir. 1991). Most courts define “knowing” conduct as an act or omission done voluntarily and intentionally, not because of mistake or accident. *See, e.g.*, FIFTH CIRCUIT PATTERN JURY INSTRUCTION (CRIMINAL CASES) 1.37 (2012). That would seem to rule out ESA charges for negligent or even grossly negligent conduct, which history suggests is the most common cause of major peacetime oil spills. However, there may be limited circumstances in which the Government could bring ESA charges in an oil spill context.

One possible approach might be to focus on the knowing violation of a regulation promulgated under the ESA. In addition to prohibiting takes of listed species, the ESA also authorizes criminal charges for knowing violations of ESA regulations. 16 U.S.C. §§ 1538(a)(1)(G), 1540(b)(1) (2015). For example, in 2007 Princess Cruise Lines pleaded guilty to violating the ESA by failing to maintain a safe speed, as required by ESA regulations, while near two humpback whales in Glacier Bay National Park in Alaska. *See* Env’tl. Crimes Section, Env’t and Natural Res. Div., U.S. Dep’t of Justice, *Pleas/Sentencing*, ENVTL. CRIMES MONTHLY BULL. 5, 12 (2007), available at <http://www.justice.gov/enrd/2007/LPS-191101-v1-ECS Bulletin 2007 03 Block.PDF>. Although the evidence strongly suggested that the cruise ship at issue struck one of the whales, there was no indication that the pilot or captain “knowingly” killed a whale. Consequently, instead of criminally prosecuting Princess Cruise Lines for a direct “take,” the Government charged a knowing violation of 50 C.F.R. § 224.103(b)(3), a regulation requiring vessels to operate at a slow, safe speed when near a humpback whale. *See* 50 C.F.R. § 224.103(b)(3) (2015). If investigators were to identify and document the violation of some applicable ESA regulation, a similar theory might be used in an oil spill case.

The ESA also provides criminal penalties for knowing violations of ESA permits. 16 U.S.C. § 1540(b)(1) (2015). Although, for reasons discussed below, it is highly unlikely that any federal agency would issue a permit for the taking of threatened or endangered species by means of an oil spill, investigators should determine whether any responsible parties have any ESA permits, including incidental take permits, which might apply to the particular facts under investigation. If such a permit exists and has been knowingly violated, it may provide an alternate basis for prosecution.

Finally, at least one commentator has suggested that the Government might establish knowing conduct where “companies cut corners or deviate[] so much from standard industry practice that they knew a blowout could happen.” David M. Uhlmann, *Prosecuting Crimes Against the Earth*, N.Y. TIMES,

June 3, 2010, available at http://www.nytimes.com/2010/06/04/opinion/04uhlmann.html?_r=0. In other words, the Government might argue that a defendant acted knowingly if that defendant knew that a spill was likely or highly likely to occur, and yet knowingly failed to take available measures to prevent or stop the spill. *See, e.g., United States v. Conrail Rail Corp.*, Crim. No. 95-10227 (D. Mass. Nov. 24, 1995) (corporate defendant pleaded guilty to knowingly discharging oil based on its ongoing failure to maintain and repair an oil water separator that the company knew was inoperable and was allowing oil to enter the Charles River during significant rainfall). However articulated, such an argument would push the boundaries of what is understood as “knowing” conduct, *see* Uhlmann (recognizing such a theory as “untested” and “aggressive”), and its chances of success would depend greatly upon the particular facts and evidence in a given case.

Types of harm covered: Another issue to keep in mind in an ESA investigation or prosecution arising from an oil spill relates to the types of harm that would be covered. The ESA prohibits, among other things, the knowing “take” of a threatened or endangered species. *See* 16 U.S.C. §§ 1538(a)(1), 1540(b) (2015). The Act defines “take” to include (as applicable to an oil spill scenario) “harm,” “harass,” or “kill.” *Id.* § 1532(19). Under U.S. Fish and Wildlife Service (FWS) regulations implementing the ESA, “harm” is defined to mean “an act which actually kills or injures wildlife.” 50 C.F.R. § 17.3 (2015). Such harm “may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” *Id.* “Harass” is somewhat more broadly defined as “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying [an ESA-protected animal] to such an extent as to significantly disrupt normal behavioral patterns.” *Id.*

These definitions of “take” clearly cover the direct and significant oiling of animals, whether or not resulting in death. Heavy and even moderate oiling of animals can lead to starvation, overexertion, hyper- or hypothermia depending on the circumstances, and various kinds of external and internal (such as digestive tract) irritation, all of which should be considered to “injure” wildlife. There may be some question, on the other hand, whether “light” oiling or “spotting” would constitute a take under the regulatory definition of “harm,” depending on whether the effects on the animal are substantial enough to constitute “injury.”

Significant oiling of habitat, meanwhile, will constitute an ESA take under the definitions of “harm” and “harass” if it leads to significant disruption or impairment of behavioral patterns. (Note that the ESA has a broader reach than the MBTA in this respect. *See Seattle Audubon Soc’y v. Evans*, 952 F.2d 297, 302–03 (9th Cir. 1991).) The oiling of nesting or feeding grounds is a common result of major spills, and such impacts should constitute takes under the ESA whenever the oiling is substantial enough to impact the behavior of threatened or endangered species. Proving such impacts beyond a reasonable doubt, however, can be challenging, and investigators and prosecutors are encouraged to consult expert witnesses early in the investigation if such charges are contemplated.

Authorization: In some criminal prosecutions under the ESA, a question arises whether the defendant possessed a permit or other authorization to take the animal at issue. 16 U.S.C. § 1538(a) (2015) (making the take prohibition subject to the permit and other provisions of 16 U.S.C. § 1539). In the oil spill context, such a defense is highly unlikely to succeed.

The FWS or the National Oceanic and Atmospheric Administration (NOAA) may issue “incidental take permits” directly authorizing harm that is “incidental” to, but not the purpose of, otherwise lawful activity by private persons or entities. *Id.* § 1539(a)(1)(B). Takes may also be indirectly permitted, when a government entity or permittee acts in compliance with the conditions of a valid “incidental take statement.” *Id.* § 1536(o); 50 C.F.R. § 402.14(i) (2015); U.S. FISH & WILDLIFE SERV. & NAT’L MARINE FISHERIES SERV., ENDANGERED SPECIES CONSULTATION HANDBOOK, at 4-47 (1998) (HANDBOOK), available at https://www.fws.gov/ENDANGERED/esa-library/pdf/esa_section7_hand

[book](#).

However, the take of a threatened or endangered species as a result of a major oil spill cannot be authorized by any federal agency. By law, the “incidental takes” that may be authorized pursuant to the ESA are limited to takes that result from an “otherwise lawful activity.” 50 C.F.R. 402.02 (2015); HANDBOOK, at 4-48. NOAA has interpreted this requirement to mean that incidental takes caused by oil spills cannot be authorized in an incidental take statement because they result from “unlawful activity,” that is, a discharge of oil in violation of the Clean Water Act. *See* Memorandum from Roy E. Crabtree, Ph.D., Reg’l Adm’r, Se. Reg’l Office, Nat’l Marine Fisheries Serv., Nat’l Oceanic & Atmospheric Admin. to Joseph Christopher, Reg’l Supervisor, Minerals Mgmt. Serv. 101 (June 29, 2007) 101, available at http://www.nmfs.noaa.gov/ocs/mafacs/meetings/2010_06/docs/mms_02611_leases_2007_2012.pdf (setting forth NMFS’s biological opinion regarding Minerals Management Service’s request for consultation on the effects of a 5-year OCS oil and gas leasing program). FWS took a similar position in the related context of incidental take regulations under the Marine Mammal Protection Act for polar bears and walrus in Alaska. *See* Incidental Take During Specified Activities, 76 Fed. Reg. 47010-01, 47031 (Aug. 3, 2011). This agency interpretation of the ESA is entirely reasonable, appears to have been consistent over time, and should be afforded deference by the courts.

Unit of prosecution: Another issue relevant to oil spill prosecutions under the ESA (or any of the other statutes discussed below) is unit of prosecution. Federal wildlife prosecutions have approached unit of prosecution in several different ways, depending on the context and the particular violation charged, including the following examples:

- One count per animal: *United States v. Equity Corp.*, Cr. No. 75-51 (D. Utah Dec. 8, 1975) (MBTA)
- One count for several animals on different occasions: *United States v. Pedersen*, 40 F. App’x 381, 383 (9th Cir. 2002) (ESA)
- One count per day of violations: *Rogers v. United States*, 367 F.2d 998, 999 (8th Cir. 1966) (MBTA)
- One count per species per day: *United States v. Kapp*, 419 F.3d 666, 671 (7th Cir. 2005) (ESA); *United States v. FMC Corp.*, 572 F.2d 902, 903 (2d Cir. 1978) (MBTA)
- One count per year of violations: *United States v. Tempotech Indus., Inc.*, 100 F.3d 941 (Table), 1996 WL 14056, at *2 (2d Cir. Jan. 12, 1996) (Lacey Act)
- One count per act or incident causing violations: *Exxon Valdez* and *Deepwater Horizon* cases (MBTA)

Although unit of prosecution has seldom been litigated in the context of wildlife crimes, case law suggests that, at least in industrial take cases (including oil spills), prosecutors may be limited to charging one count per act or omission of the defendant, even where such act or omission causes the take of multiple animals at once or over time. In *United States v. Corbin Farm Services*, 578 F.2d 259 (9th Cir. 1978), the Ninth Circuit held that the Government could charge only one MBTA count per “transaction” resulting in bird deaths, regardless of the timing or number of deaths. *Id.* at 260 (adopting district court opinion, *United States v. Corbin Farm Services*, 444 F. Supp. 510, 527–31 (1978)). The Ninth Circuit adopted the analysis of the district court, which concluded that the language of the MBTA was unclear as to the appropriate unit of prosecution for unpermitted takes and, consequently, the rule of lenity required that a single transaction (in that case, a single application of pesticide) be charged as a single count. *Corbin Farm Services*, 444 F. Supp. at 529 n.8, 531 (citing *Bell v. United States*, 349 U.S. 81 (1955)). Similar analyses led other courts to conclude, for example, that a single shotgun blast that injured two officers could be charged only as one count of assault under 18 U.S.C. § 111, *Ladner v. United States*, 358 U.S. 169, 173–79 (1958), and that a bank robber who killed two women when he crashed his getaway

car could be charged with only one count of killing a person while attempting to avoid apprehension for bank robbery under 18 U.S.C. § 2113(e), *United States v. Jackson*, 736 F.3d 953, 955–57 (10th Cir. 2013). *But see United States v. McVeigh*, 940 F. Supp. 1571, 1583–84 (D. Colo. 1996) (upholding separate federal murder counts for each federal officer killed by Oklahoma City bombing).

Ultimately the allowable unit of prosecution is a question of congressional intent. *See, e.g., Ladner*, 358 U.S. at 173; *McVeigh*, 940 F. Supp. at 1583. Prosecutors considering charging more than one ESA count should closely examine the conduct in their case, as well as the language and legislative history of the ESA, to determine, if possible, the unit of prosecution intended by Congress.

B. Marine Mammal Protection Act

Another group of animals at risk from oil spills is marine mammals. For example, as noted above, marine mammals were significantly impacted by the *Exxon Valdez* tanker spill (including otters, seals, and whales) and the *Deepwater Horizon* blowout and spill (primarily dolphins). Consequently, it is worth examining the possibility of criminal charges under the Marine Mammal Protection Act (MMPA), although—as with the ESA—there are some potential difficulties.

The MMPA generally prohibits the “taking” of marine mammals within U.S. territory or on the high seas. 16 U.S.C. § 1372(a)(1) (2015); 50 C.F.R. § 216.11(a) (2015). Knowing violations are Class A misdemeanors, subject to up to 1 year of imprisonment and a fine of up to \$100,000 for individual defendants, \$200,000 for organizations, or twice the gross gain or loss resulting from the offense. *See* 16 U.S.C. § 1375(b) (2015); 18 U.S.C. § 3571 (2015).

Mental state: As with the ESA, the criminal enforcement provision of the MMPA requires “knowing” conduct. 16 U.S.C. § 1375(b) (2015). *See also United States v. Hayashi*, 22 F.3d 859, 861 (9th Cir. 1993) (“The MMPA prescribes both civil and criminal penalties, but the latter apply only to persons who ‘knowingly’ violate any provision of the act.”). That mental state requirement will likely rule out MMPA criminal charges following most oil spills, which historically tend to involve negligent, rather than intentional, conduct.

Similar to the ESA context discussed above, there may be limited circumstances in which those responsible for a spill might be said to have knowingly violated a provision of a permit or regulation issued under the MMPA. *See* 16 U.S.C. § 1375(b) (2015) (criminalizing violations of “any provision of this subchapter or of any permit or regulation issued thereunder”). In an appropriate case, there may be an argument that a defendant acted knowingly because it knew of the likelihood or inevitability of harm to marine mammals and knowingly failed to take reasonable and available measures to prevent such harm.

Types of harm covered: The MMPA applies only to specific types of harm defined by statute and regulation, but it should have clear application to most impacts on marine mammals resulting from oil spills. “Take” for MMPA purposes is defined to include (as likely applicable to oil spills) the harassment or killing of a marine mammal. *Id.* § 1362(13). Congress amended the MMPA in 1994 to define “harassment” to include

any act of pursuit, torment, or annoyance which—

- (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or
- (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

Id. § 1362(18). This statutory definition of harassment, which is incorporated in the MMPA definition of “take,” strongly indicates that the MMPA is intended to cover indirect harms to marine mammals, such as the oiling of breeding or feeding areas.

The MMPA's implementing regulations further state that "take" shall include "the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal." 50 C.F.R. § 216.3 (2015). This regulatory definition further supports the notion that takes under the MMPA can be indirect and, in particular, indicates that spills resulting from tankers, drilling rigs, or other vessels should be covered.

Prosecutors considering an MMPA take charge should read the Ninth Circuit's decision in *United States v. Hayashi*, 22 F.3d 859 (9th Cir. 1993). In that case, decided before the 1994 MMPA amendments, the defendant was convicted of "taking" marine mammals after he shot a rifle into the water to discourage a group of porpoises from eating bait off of his fishing lines. The Ninth Circuit examined the MMPA's statutory definition of "take," as well as a regulatory definition, neither of which at that time defined "harass." *Id.* at 863–64. Based on context and comparison with other kinds of take, such as hunting, killing, and capturing, the court determined that a MMPA take by harassment must involve a "direct and significant" intrusion upon the normal activities of a marine mammal. *Id.* at 864–65. The court concluded that shooting into the water to dissuade porpoises from eating off of fishing lines was not covered, both because it was not significant enough to constitute a criminal take and because feeding from fishing lines was not a normal feeding habit of porpoises. *Id.* at 865. As noted above, *Hayashi* was decided before Congress provided a statutory definition of "harass" in 1994, and that amendment may have effectively overruled it. However, *Hayashi* still suggests that only significant disruptions of marine mammal behavior will constitute a take under the MMPA.

Authorization: Like the ESA, the MMPA provides for incidental take authorization in some circumstances, provided, inter alia, that the take would be of small numbers and have no more than a negligible impact on the species. 16 U.S.C. § 1371(a)(5)(A)(i) (2015); 50 C.F.R. §§ 18.27(b) (USFWS), 216.102 (NOAA) (2015). However, the authors are unaware of any incidental take permits that would even arguably apply to impacts from an oil spill and, as discussed above in relation to the ESA, agency interpretations suggest that takes resulting from a spill could never be authorized.

IV. Statutes protecting particular areas

While the MBTA, ESA, and MMPA focus on particular *kinds* of animals, other statutes protect wildlife based instead on *where* it is found. Examples of this second category include the National Wildlife Refuge Administration Act and the National Parks Organic Act, each of which is discussed below.

A. National Wildlife Refuge System Administration Act

The National Wildlife Refuge System Administration Act (Refuge Act) provides that "[n]o person shall . . . take or possess any fish, bird, mammal, or other wild vertebrate or invertebrate animals or part or nest or egg thereof within any such area; or enter, use, or otherwise occupy any such area for any purpose." 16 U.S.C. § 668dd(c) (2015). The penalties provision at § 668dd(f) provides that a knowing violation of the Refuge Act or its implementing regulations shall constitute a Class A misdemeanor criminal offense, subject to maximum penalties of 1 year in prison and a fine of \$100,000 for individuals or \$200,000 for organizations. *Id.* § 668dd(f)(1); 18 U.S.C. § 3571 (2015). "Other violations" of the Act or regulations are treated as Class B misdemeanors, with maximum penalties including 6 months of imprisonment and a \$5,000 fine for individuals or a \$10,000 fine for organizations. 16 U.S.C. § 668dd(f)(2) (2015); 18 U.S.C. § 3571 (2015). In both instances, the maximum fine is subject, as always, to the possibility of an alternative fine based on gain or loss under 18 U.S.C. § 3571(d).

Mental state: Most oil spills are likely to fall under the "other violations" provision of the Refuge Act, rather than the "knowing violations" provision. The Act and its regulations say nothing about

what mental state, if any, is required to make out such “other violations,” but the text and legislative history strongly suggest that a strict liability standard applies.

The Refuge Act penalizes “knowing” violations of the Act or of its implementing regulations as Class A misdemeanors, while punishing “other violations” as Class B misdemeanors. 16 U.S.C. § 668dd(f) (2015). This textual distinction indicates that “other” violations of the Refuge Act need not be “knowing[ly]” violated. *See United States v. Garrett*, 984 F.2d 1402, 1409 (5th Cir. 1993) (examining criminal provision in Federal Aviation Act and noting that “the fact that section 1472(l)(2) speaks of willful or reckless violations of section 1472(l)(1) is convincing evidence that one need not act willfully or recklessly to violate section 1472(l)(1)”). However, at least one court of appeals has held that mere juxtaposition with a “knowing” offense is insufficient evidence of congressional intent to do away with an intent element altogether, and most courts employ a presumption against strict liability that may be overcome only by some affirmative indication of congressional intent to impose criminal liability without mens rea. *See id.* at 1409–10.

In the case of the Refuge Act, there is such an indication of congressional intent. The Act was amended in 1998 specifically to provide a Class B misdemeanor offense for “unintentional violations.” Migratory Bird Treaty Act Amendments, Pub. L. No. 105-312, 112 Stat. 2956, § 206 (1998); SEN. REP. NO. 105-310, at 2–3 (1998). In addition to using the word “unintentional,” the Senate Report stressed that “[u]nlike Class B misdemeanors, Class A misdemeanors would [continue to] require a showing that the person acted ‘knowingly,’ that is, acted voluntarily and intentionally, not through ignorance, mistake, or accident.” SEN. REP. NO. 105-310, at 2–3 (1998) (emphasis added). *See also United States v. Unser*, 165 F.3d 755, 762–64 (10th Cir. 1999) (no mens rea requirement for Class B offense of using vehicle in wilderness area); *Tait v. United States*, 763 F. Supp. 2d 786, 791 n.5 (E.D. Va. 2011) (concluding that the plain language and legislative history of Refuge Act regulations “show that Congress intended to criminalize such behavior, even when the perpetrator unintentionally committed the act”).

Strict liability for the Refuge Act Class B misdemeanor also is consistent with courts’ overall rationale for recognizing strict liability offenses. In *Garrett*, for example, the Fifth Circuit stressed that the “touchstone” of its analysis was “the severity of the punishment authorized by the statute,” and suggested that petty offenses (such as the Refuge Act Class B misdemeanor charge) are most appropriate for strict liability. *Garrett*, 984 F.2d 1412 & n.21. On the whole, therefore, it seems safe to say that a Class B misdemeanor Refuge Act charge is a strict liability offense.

Types of harm covered: One of the attractions of a Refuge Act charge is the breadth of wildlife harms covered. As noted above, the text of 16 U.S.C. § 668dd(c) itself addresses wildlife and environmental impacts, and that coverage is supplemented and clarified by the Act’s implementing regulations. For example, 50 C.F.R. § 27.21 prohibits the take of “any animal or plant on any national wildlife refuge.” 50 C.F.R. § 27.21 (2015). Even broader is 50 C.F.R. § 27.51, which states that “[d]isturbing, injuring, spearing, poisoning, destroying, collecting or attempting to disturb, injure, spear, poison, destroy or collect any plant or animal on any national wildlife refuge is prohibited” without a permit. *Id.* § 27.51. These provisions suggest that virtually any disturbance or injury to any plant or animal life within a national wildlife refuge may be a basis for prosecution. The few reported decisions from Refuge Act prosecutions also suggest broad protection. *See United States v. Peterson*, 632 F.3d 1038 (8th Cir. 2011) (draining wetlands); *United States v. Aanerud*, 893 F.2d 956 (8th Cir. 1990) (leech trapping); *United States v. Vesterso*, 828 F.2d 1234 (8th Cir. 1987) (digging ditches in wetlands); *United States v. Harris*, No. 93-415, 1994 WL 532585, at *1 (E.D. La. Sept. 27, 1994) (taking fish).

Given the breadth of these protections, there is an argument to be made that defendants in oil spill cases should be criminally liable not only for impacts caused directly by the oiling of wildlife and wildlife habitat, but also for foreseeable damage caused by response and cleanup activities. For example, cleanup crews using loud machinery, ATVs, and helicopters or other low-flying aircraft can be extremely disruptive to nesting migratory birds. *See, e.g., Cain Burdeau, Messy Cleanup of BP Oil Spill Damages*

the Gulf, THE SENTINEL (July 21, 2010), available at http://hanfordsentinel.com/news/national/messy-cleanup-of-bp-oil-spill-damages-the-gulf/article_b6a9ea5a-3f9b-50b7-a304-13b26fdc1fd0.html.

Similarly, the kind of deep cleaning of beaches that was undertaken on some Gulf Coast tourist beaches after the *Deepwater Horizon* spill can have significant impacts on wildlife, so much so that resource managers in some affected areas chose to forego the most invasive cleanup techniques. See, e.g., OPERATIONAL SCI. ADVISORY TEAM (OSAT), SUMMARY REPORT FOR FATE AND EFFECTS OF REMNANT OIL IN THE BEACH ENVIRONMENT 15 (2011), available at <http://www.restorethegulf.gov/sites/default/files/u316/OSAT-2%20Report%20no%20ltr.pdf> (noting that sensitive beach habitat within a national wildlife refuge was subject to different oil cleanup methods than “amenity” beaches in the same area). There should be little dispute that these and some other response activities—although arguably beneficial, or at least necessary, in the aftermath of a spill—in fact “disturb,” and in some instances, “injure” or “destroy” wildlife and plants.

The case law on proximate cause is clear that a defendant may be held criminally responsible for all foreseeable consequences of his or her actions, even when the harm is directly caused by an innocent third party. See *United States v. Fei*, 225 F.3d 167, 171 (2d Cir. 2000) (“Where it reasonably might or should have been foreseen by appellant that the commission of his act would be likely to create a situation which would expose another to the danger of injury or death, [even] at the hand of a non-participant in such reckless conduct, the creation of the dangerous situation is to be regarded as the proximate cause of the death of the innocent person.” (quoting *Hoopengartner v. United States*, 270 F.2d 465, 469 (6th Cir.1959)); *United States v. Guillette*, 547 F.2d 743, 749 (2d Cir. 1976) (“In many situations giving rise to criminal liability, the death or injury is not directly caused by the acts of the defendant but rather results from intervening forces or events, such as negligent medical treatment, escape attempts, or the negligent or intentional acts of a third party. Where such intervening events are foreseeable and naturally result from a perpetrator’s criminal conduct, the law considers the chain of legal causation unbroken and holds the perpetrator criminally responsible for the resulting harm.”).

The reach of this doctrine is illustrated by the *Hoopengartner* case. In that case, the defendant’s reckless operation of a speedboat caused a collision with, and the sinking of, another vessel, after which one of the sinking vessel’s passengers was struck and killed by some object, possibly a rescue boat. In upholding the defendant’s manslaughter conviction, the Sixth Circuit reasoned as follows:

It would seem clear that one of the natural and probable consequences of the manner of operation of the boat by appellant that night was that he would strike another boat in the channel; and that a natural and probable consequence of a collision was that such persons as were cast into the water would be subject to the perils of rescue operations conducted in the dark on dangerous water. It is a foreseeable consequence of such conduct that a person so cast into such dark waters, in a busy lane where other boats are operated, would or might be struck or sustain a blow in the process of being rescued. Where it reasonably might or should have been foreseen by appellant that the commission of his act would be likely to create a situation which would expose another to the danger of injury or death, at the hand of a non-participant in such reckless conduct, the creation of such dangerous situation is to be regarded as the proximate cause of the death of the innocent person.

Hoopengartner, 270 F.2d at 469. By analogy, when harmful cleanup activities are a “natural and probable consequence” (that is, a foreseeable consequence) of a defendant’s conduct resulting in an oil spill, prosecutors should not hesitate to hold the defendant criminally liable for harms arising from response activities necessitated by the spill. As a separate matter, defendants should also be liable for restitution covering the reasonable costs of cleanup and response activities.

“Within” a refuge: One potential limitation on criminal charges for impacts on national wildlife refuges may come from the Refuge Act’s and its regulations’ references to offenses “in the System,” or “within” or “on” a refuge. See, e.g., 16 U.S.C. § 668dd(a)(1) (defining the National Wildlife Refuge

System subject to the statute), § 668dd(c) (prohibitions applicable “in any area of the System”) (2015); 50 C.F.R. §§ 27.21, 27.51 (2015) (regulatory prohibitions applicable “on any national wildlife refuge”). A defendant might argue—we think incorrectly—that this apparent geographical limitation precludes prosecution of spills that originate outside the boundaries of any particular national wildlife refuge.

According to a venerable line of cases, an offense which is defined in part by its consequences is committed where those consequences take effect. *Daeche v. United States*, 250 F. 566, 570 (2d Cir. 1918). *See also United States v. Davis*, 25 F. Cas. 786, 787 (D. Mass. 1837) (in maritime case, finding that an offense was committed not where the shot was taken, but rather where “the shot took effect and the death happened”). *Cf.* 22 C.J.S. Criminal Law § 205 (2014) (“[D]etrimental effects constitute an element of the offense and since they occur within the country, jurisdiction is properly invoked under the territorial principle” of federal jurisdiction). The Refuge Act offense is defined by harmful consequences to plants and animals, and thus, there is a strong argument that whenever an injury, disturbance, destruction, etc. occurs within the boundaries of a national wildlife refuge, the offense will have occurred there, regardless of whether the blown-out well or the leaking tanker is located elsewhere.

That approach is consistent with the common sense notion that a defendant constructively acts “within” an area whenever he or she (or a corporate defendant) intentionally or foreseeably causes an object to enter that area. For example, a hunter who stands 10 feet outside a national wildlife refuge and knowingly shoots into the refuge, killing an animal therein, should not escape liability simply because the shot was fired from outside the refuge. If a polluter pulls a dump truck up to, but not over, the boundary line of a national wildlife refuge and dumps hazardous waste into the refuge, it would be silly to suggest that the dumping does not occur “within” the refuge. By the same reasoning, a company drilling for or transporting oil should not escape liability when an oil spill impacts a national wildlife refuge, so long as oiling of the refuge was caused by the defendant’s conduct and was fairly foreseeable. Notably, the *Deepwater Horizon* spill, to cite one example, suggests that oiling of refuges by spills in the Gulf of Mexico is entirely foreseeable—both BP’s Initial Exploration Plan for the Macondo well and its Oil Spill Response Plan for the Gulf of Mexico specifically predicted that a spill could impact coastal wildlife refuges.

Authorization: As with the ESA and MMPA, there is little chance that wildlife impacts from a major oil spill would be considered permitted or authorized under the Refuge Act. In the National Wildlife Refuge System, permitting is handled by individual refuges and the kinds of permitted activities vary significantly, from hunting and fishing, to research and educational activities, to commercial activities such as guiding hunters or anglers, or even agriculture. However, the authors are aware of no existing mechanism by which a company or individual could obtain a permit to impact plants, animals, or refuge property as a result of oil exploration or production.

Unit of prosecution: Like the ESA (as well as the MMPA and Parks Act), the Refuge Act does not specifically address unit of prosecution. It prohibits various types of harm to “any animal” on a wildlife refuge. Although that language might suggest a focus on individual animals—and there appears to be no question that impacts on a single animal are sufficient for criminal liability—courts have not always considered Congress’s use of “any” to indicate a unit of prosecution based on the number of victims, rather than on the number of acts or omissions. *See, e.g., United States v. Jackson*, 736 F.3d 953, 956 (10th Cir. 2013) (holding that “any person” language in bank robbery statute is limited by lenity “to only one unit of prosecution based on its ambiguity” even though defendant killed two women while attempting to avoid apprehension); *United States v. Prestenbach*, 230 F.3d 780, 782–83 (5th Cir. 2000) (holding that “any” language in counterfeit statute was ambiguous and that “[k]eeping four altered money orders in a lotion bottle is one action, and therefore one crime”). Instead, courts ask whether Congress intended to punish separate and distinct acts, with a particular focus on the physical conduct of the defendant. *Prestenbach*, 230 F.3d at 783. Considering the case law and the lack of clear indications in the statute, there is a possibility that courts might limit prosecutors to one Refuge Act “take” count for all

covered harm to a particular wildlife refuge, or even to all refuges affected by a spill, if the harm arose from a single criminal act or omission.

The structure of the Refuge Act, however, and its implementing regulations, offers at least one other possible charging approach. Prosecutors might include one count for “take” under § 668dd(c) and 50 C.F.R. § 27.21, and a separate count for disturbing, injuring, etc. under 50 C.F.R. § 27.51. In general, prosecutors may charge a defendant under more than one statutory provision, based on a single criminal act or transaction, where each charged offense requires proof of different facts. *Blockburger v. United States*, 284 U.S. 299, 304 (1932) (“The applicable rule is that, where the same act or transaction constitutes a violation of two distinct statutory provisions, the test to be applied . . . is whether each provision requires proof of a fact which the other does not.”). See also *United States v. Stubbs*, 181 F. App’x 697, 698 (9th Cir. 2006) (prosecution under two Park Service regulations for the same conduct did not violate the double jeopardy clause and was proper under the *Blockburger* test). Because the proof required to establish a “take” is more demanding than that required to establish a “disturbance” of wildlife, separate charges under the two provisions should pass the *Blockburger* test.

B. National Parks Organic Act

The National Parks Organic Act (Parks Act) and its implementing regulations broadly prohibit harm to wildlife, waters, and real property within the national park system. With specific respect to wildlife, 36 C.F.R. § 2.1(a)(1) prohibits “[p]ossessing, destroying, injuring, defacing, removing, digging, or disturbing from its natural state . . . [l]iving or dead wildlife or fish, or the parts of products thereof, such as antlers or nests” (as well as plants). Section 2.2 also prohibits the taking of wildlife, except by authorized hunting or trapping activities. In addition, 36 C.F.R. § 2.14(a)(6) prohibits polluting or contaminating park waters, and 36 C.F.R. § 2.31 prohibits destroying, injuring, defacing, or damaging real property, which might include beaches, marshes, and other lands or waters important to wildlife.

Under 36 C.F.R. § 1.3(a), any person who violates any of the preceding regulatory provisions is subject to criminal penalties of up to 6 months in prison and a fine as provided by law (or an alternative fine under 18 U.S.C. § 3571(d)). (Note that subsections (b)–(d) of 36 C.F.R. § 1.3 provide different penalties for violations in certain park areas, such as military battlefields, that are unlikely to be affected by an oil spill.)

Mental state: Like the Refuge Act provisions, the Parks Act and its regulations do not specify the mental state required for conviction. Based on the available case law, it is likely that a court would find strict liability, or at most a negligence or “should have known” mens rea requirement.

Several courts have found violations of National Park Service regulations to be strict liability offenses. See, e.g., *United States v. Unser*, 165 F.3d 755, 761–64 (10th Cir. 1999) (no mens rea requirement for violation of Forest Service statute and a regulation against possession of motor vehicle in wilderness area); *United States v. King*, No. 4:08-cr-008, 2008 WL 4710744, at *7–8 (D. Alaska Oct. 24, 2008) (no mens rea required for hunting in park area in violation of 36 C.F.R. § 2.2(a)(1)); *United States v. London*, No. CR-07-0769, 2007 WL 4557787, at *3 (N.D. Cal. Dec. 21, 2007) (strict liability for possession of bicycle in wilderness area of national seashore).

In *United States v. Launder*, 743 F.2d 686 (9th Cir. 1984), the Ninth Circuit inferred a mens rea requirement for the offense of “permitting or suffering” a fire to burn out of control in a national forest. *Id.* at 689–90. However, *Launder* and subsequent cases make clear that the inference of a mens rea requirement was specifically predicated upon the significance of the terms “permit” and “suffer,” which the court of appeals interpreted to imply a volitional act. *Id.* See also *United States v. Kent*, 945 F.2d 1441, 1445–46 (9th Cir. 1991) (distinguishing *Launder* and finding strict liability for unauthorized residence in national forest); *United States v. Scotford*, No. Mag. S-06-0330, 2007 WL 1931666, at *5 (E.D. Cal. June 29, 2007) (distinguishing *Launder* and finding no mens rea requirement for violations relating to

operation of vehicle off road in national forest). As in *Kent* and *Scotford*, and unlike in *Launder*, the National Park Service regulations most likely to be at issue in oil spill cases speak to actions and consequences (take, destroy, injure, disturb, etc.) and not to volition. Consequently, the *Launder* decision should not preclude a strict liability standard in Parks Act prosecutions of the kind suggested here.

As discussed above in relation to the Refuge Act, courts generally apply a presumption against strict liability. *See United States v. Garrett*, 984 F.2d 1402, 1410 (5th Cir. 1993). Because the legislative history of the Parks Act criminal offenses contains no discussion of mens rea, the presumption against strict liability might lead a district court to require that a defendant knew or should have known that his or her conduct would result in impacts on wildlife in a national park. On the other hand, in *Garrett*, the Fifth Circuit suggested that petty offenses (such as the Parks Act offense discussed here) are particularly suited to strict liability, and other courts that have examined national park or national forest regulations have concluded that such regulations create “public welfare” offenses for which mens rea is not required, even when Congress is silent on the issue. *See United States v. Unser*, 165 F.3d 755, 762–64 (10th Cir. 1999); *United States v. London*, No. CR-07-0769, 2007 WL 4557787, at *3 (N.D. Cal. Dec. 21, 2007). It is therefore unclear whether a court might read some minimal negligence standard into the Parks Act for purposes of criminal prosecution. Even if such a requirement were inferred, however, it should be met in the vast majority of spills that warrant federal criminal prosecution.

Types of harm covered: As with the Refuge Act, the Parks Act provides broad protection for wild plants, animals, and waters within the boundaries of a national park or seashore. *See* 36 C.F.R. §§ 2.1(a)(1), 2.2, 2.14, 2.31 (2015). Virtually any destruction, injury, or disturbance of any plant or animal life within a national park is prohibited.

The few available cases reflect this broad protection. *See, e.g., United States v. Morgan*, 92 F.3d 1183, No. 96-4187, 1996 WL 452417, at *1 (4th Cir. Aug. 12, 1996) (cutting down trees); *United States v. Oros*, No. 95-5073, 1995 WL 729480, at *1 (4th Cir. Dec. 11, 1995) (harvesting ginseng); *United States v. Hurley*, No. 2:11cr11, 2011 WL 1706753, at *1–2 (W.D.N.C. May 3, 2011) (harvesting ginseng); *United States v. King*, No. 4:08-cr-008, 2008 WL 4710744, at *1, *14 (D. Alaska Oct. 24, 2008) (killing moose); *United States v. Skorepa*, No. 5:05, 2005 WL 3634605, at *1, *7 (N.D. Ohio Dec. 20, 2005) (dumping refuse).

One potential limitation on the reach of the Parks Act and its regulations was suggested by the Fourth Circuit in *United States v. Burrell*, No. 92-5223, 1993 WL 73705, at *3 (4th Cir. Mar. 17, 1993) (unpublished disposition). There, the court held that the mere possession of ginseng within a national park could not be a violation of Park Service regulations absent evidence that the ginseng was removed from the park itself and not from neighboring property. *Id.* at *3 & n.3. The facts of *Burrell*, however, and the court’s own comments suggest that it would not limit prosecution on the likely facts of an oil spill that enters a park and impacts wildlife therein. To be safe, investigators and prosecutors should document the fact that the wildlife or other natural features impacted by the spill were physically located within the Park prior to the spill, and were impacted there, as opposed to having flown or floated into the Park already oiled.

“Within” a national park: Similar to the Refuge Act and its regulations, the National Park Service regulations apply to all persons entering, using, visiting, or otherwise “within” certain enumerated areas subject to the Service’s management. 36 C.F.R. § 1.2 (“Applicability and scope”) (2015). That language suggests that typically only conduct that occurs inside a national park is subject to the regulations, including those protecting wildlife. *Cf. United States v. King*, No. 4:08-cr-008, 2008 WL 4710744, at *7–8 (D. Alaska Oct. 24, 2008) (“[T]he government must prove that King hunted, and that he did so in the Denali National Park”); *United States v. Jarrell*, 143 F. Supp. 2d 605, 607 (W.D. Va. 2001) (hunting offense required proof that the conduct occurred within park boundaries).

In a major oil spill context, it is of course highly unlikely that the source of the spill will be located within a national park. However, as suggested above in relation to the Refuge Act, when an offense is defined in terms of a prohibited consequence, the offense is generally deemed to be complete where that consequence occurs. A defendant might also be deemed to effectively “reach into” a park by causing oil or another item or substance to enter the park, although the defendant remains outside. Consequently, there are good arguments that wildlife impacts inside a national park should be covered by the Parks Act and its regulations, even if the cause of the spill occurred outside the park.

Authorization: As with the other statutes discussed above, it is highly unlikely that wildlife impacts from an oil spill would be found to be permitted or otherwise authorized so as to defeat prosecution. National Park Service regulations provide for the issuance of permits authorizing a range of activities that are “consistent with applicable legislation, Federal regulations and administrative policies, and [are] based upon a determination that public health and safety, environmental or scenic values, natural or cultural resources, scientific research [etc.] . . . will not be adversely impacted.” 36 C.F.R. § 1.6(a) (2015). Such activities can include hunting, fishing, the operation of cabins and other commercial activities, the collection of research specimens, and other activities. *See, e.g.*, 36 C.F.R. §§ 2.5, 2.10 (2015). However, the authors are aware of no permit or other authorization that would cover harm from oil exploration, production, or transportation.

V. Conclusion

Major oil spills can and often do have significant impacts on a wide array of wildlife—impacts that are not fully reflected in criminal charges under the MBTA. If (or, more likely, when) another major oil spill impacts the United States, criminal investigators and prosecutors should look beyond the MBTA and consider other potentially applicable criminal provisions, including those of the ESA, the MMPA, the Refuge Act, and the Parks Act. Each of those statutes has strengths and potential weaknesses in the oil spill context, and prosecutors’ ability to charge them will depend largely on the facts of a given case. In particular, ESA and MMPA charges will be difficult to sustain in many cases because they require “knowing” conduct, and they also cover only a very limited number of species. The Refuge Act and the Parks Act have a lesser mens rea requirement and cover a broader array of resources, but agents and prosecutors may be frustrated by the low penalties generally available for such Class B misdemeanor offenses—although the Alternative Fines Act may allow for monetary penalties substantially higher than the presumptive statutory maximums, as past MBTA prosecutions have shown. Even the ESA and MMPA offenses are only Class A misdemeanors, which may seem woefully inadequate in response to major spills like the *Exxon Valdez* and *Deepwater Horizon* spills. However, unless and until Congress sees fit to provide greater criminal sanctions for wildlife violations, generally or in the specific context of oil spills, agents and prosecutors must make do with the tools at hand. ❖

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Wildlife Forensics: An Overview and Update for the Prosecutor

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I. Introduction

Proving criminal violations that involve the poaching, smuggling, or illegal commercialization of wildlife often requires scientific testing and testimony regarding the species, cause of death, or correlation between tissue and the seized item. Such testing and testimony is usually conducted by scientists and laboratories that specialize in this area of forensic analysis. As in human-victim cases, wildlife forensic analysis may involve genetics, morphology, chemistry, and pathology. The requirements of Federal Rule of Criminal Procedure 16 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), are equally applicable in trials of wildlife crime. However, the prosecutor wishing to maximize the chances for a successful outcome must be aware of the factors affecting the types of analyses that can be conducted in wildlife cases so that relevant, effective testing is performed and admissible, unbiased expert testimony results.

II. How wildlife forensics differs from human-victim forensics

Most crime labs evaluate evidence relating to crimes committed against a single species: *Homo sapiens*. The reference database for humans is so vast, and the science regarding the human genome so robust, that judges, lawyers, and the public have come to expect virtual certainty from forensic scientists who are asked to compare two or more samples of human biological matter. The word “match” is so widely used in CSI programs discussing forensic analysis that juries expect to hear it soon after a scientist takes his or her seat on the witness stand.

In contrast, consider that over 5,000 mammalian species, 10,000 bird species, 16,000 reptile and

amphibian species, and 33,000 fish species have been identified by science—so far. Reference databases for very few of these species can be considered robust compared to those for humans, so one can easily see the challenge facing a wildlife forensic scientist asked to determine whether two items of wildlife tissue come from the same specimen (called “individualization”), or even the same species. In addition to individualization and taxonomic identification (that is, identifying an item’s source to species, genus, family, etc., see Figure 1) of fragmented, sometimes highly-degraded pieces and parts, wildlife forensic scientists are also frequently asked to determine cause-of-death and locate evidence, including projectiles and poisons, on wildlife carcasses.

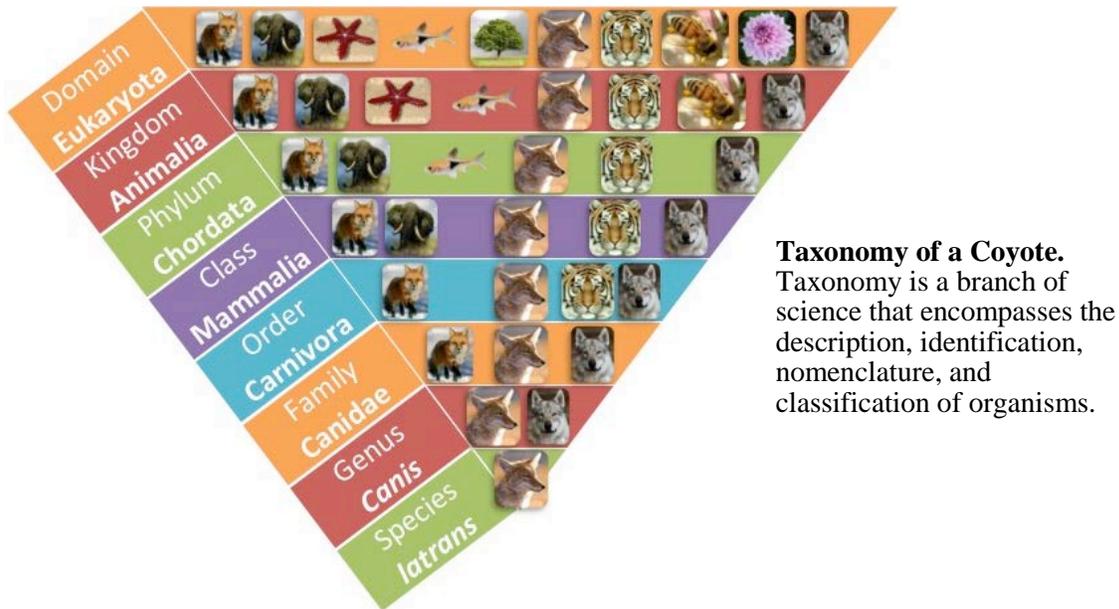


Figure 1.

Wildlife forensics is the province of a small number of laboratories and analysts. Nevertheless, the field is well-established both scientifically and legally. The National Fish and Wildlife Forensics Laboratory of the Fish and Wildlife Service was established in 1989, and has provided analysis of over 102,388 evidence items in over 13,966 wildlife crime investigations. The National Oceanic and Atmospheric Administration (NOAA) began to develop forensics capabilities in the early 1980s in response to law enforcement needs related to the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA) of the 1970s. NOAA formalized the establishment of two forensic laboratories in the 1990s. Some states developed forensic laboratories in response to the needs of state game management agencies, and yet other laboratories focus on domesticated animals.

In 2009 the National Academy of Sciences (NAS) issued a report (1) (*see* VIII. References) criticizing human forensic science methodology and practice, specifically the inappropriate application of individualization methods to latent fingerprints, bullet matching, and bite-mark analyses. No such criticism has been directed toward wildlife forensic analyses, which limit individualization to DNA-based methods. Still, wildlife forensic scientists have carefully reviewed the NAS Report’s recommendations and understand that increasing professionalism, standards, and certification are essential to continued respect and acceptance of wildlife forensic science by practitioners and the courts. The wildlife forensic laboratories mentioned in this article, and other members of the wildlife forensic science community, have worked together in recent years to define and advance best practices of the profession and respond to recommendations made by the 2009 NAS Report.

Currently, three wildlife forensic laboratories are accredited. Accreditation verifies that a laboratory is conforming to international standards (over 400 criteria) designed to insure that best

practices are being followed for, among other things, quality management, quality assurance, staff training and education, evidence handling, protocol validation and development, report writing, proficiency testing, and safety. For more information on requirements, see ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories, and ANSI/ASQ National Accreditation Board/ Forensic Quality Services Document 11, ISO/IEC 17025 Accreditation and Supplemental Requirements for Forensic Testing, including FBI QAS. Should accreditation be required for all wildlife forensic labs in the future, existing accredited labs provide a clear path for other wildlife labs to follow.

Compliance with “best practices” in a scientific discipline is an important criterion used when assessing a laboratory for accreditation. Over the years, best practices have been established by about 20 discipline-specific forensic Scientific Working Groups (SWGs) whose primary aim is to craft and promulgate standards for practitioners in their respective disciplines. The Scientific Working Group for Wildlife Forensic Sciences (SWGWILD) is the only SWG focused on non-human crimes. SWGWILD has developed an ISO-harmonized set of consensus standards and guidelines that summarize best practices for wildlife forensic laboratories (2). One of those best practices is proficiency testing, and virtually all U.S. labs with wildlife forensic practitioners also participate in the proficiency-testing program administered through the Society for Wildlife Forensic Science. As in many of the traditional forensic science disciplines (for example, the American Board of Criminalistics and the Association of Firearms and Tool mark Examiners), the Society for Wildlife Forensic Sciences has also established a program for individual professional certification based on SWGWILD criteria (3, 4). While accreditation is conferred on a laboratory, certification is conferred on a practitioner. Certification provides a third party assessment of that practitioner’s qualifications and practices, and requires ongoing professional development.

The field of wildlife forensic science is fully engaged with ongoing federal efforts to enhance forensics as a whole. This National Institute of Standards and Technology (NIST)/Department of Justice effort, known as the Organization of Scientific Area Committees (OSAC, <http://www.nist.gov/forensics/osac/index.cfm>), accepted wildlife forensics as the focus of one of the subcommittees under the Biology Special Area Committee, ensuring that our specialized expertise and concerns will be incorporated into the development of new forensic standards.

Prosecutors should make themselves aware early of the accreditation and certification status of the laboratories and scientists that may be involved in their case. The absence of either does not mean the work may not be excellent, but it does create an issue that might have to be addressed if the scientist is called to testify.

III. Common wildlife forensic issues

A. “Class character” analysis v. individualization

Confusion often arises around the word “identification” in discussions of forensic analysis. It is essential to make the distinction between general identification to a group versus identification to an individual. The process of general identification, called “class character analysis,” uses characters that are both common to a certain group or “class” and distinct from other classes, as opposed to characters that are unique to and distinctive of a single individual. Examples of routine class character analyses include identification of drugs, fibers, paint, and—in wildlife forensics—species. In wildlife forensics, “identification” refers to class character analysis, that is, taxonomic or species identification, rather than identification of an individual specimen. For example, a wildlife forensic scientist may be able to determine that a piece of ivory came from an elephant (as opposed to a walrus), but probably not a specific elephant.

In contrast, identification of an individual source is called “individualization,” and requires much

more analytical sensitivity and an extensive genetic and/or morphological database of individual variability. Individualization is sometimes carried out in wildlife forensics, but only using specialized techniques. (See Part V on nuclear DNA for individualization, population assignment, and sex determination for a detailed discussion regarding its use in wildlife forensics.) Examples of routine individualization analyses a prosecutor might reasonably expect a wildlife forensic scientist to accomplish include matching a deer gut pile in a closed area to venison steaks in a freezer, or matching a headless trophy elk carcass to a mount on a hunter's wall.

When making a request for forensic analysis of wildlife evidence, investigators and prosecutors should consider what information is necessary for the proof elements of the particular case. In some cases, such as smuggling or Lacey Act trafficking, identification to genus may be sufficient: the point is to prove the item was wildlife. Other cases, such as those involving a CITES or ESA violation, may require identification to the species or subspecies level. In a case involving an entire shipping container of wildlife, how many individual specimens must be analyzed to support an argument that the entire container of wildlife is of a particular class? Early consultation with the wildlife forensic laboratory will help both the requester and the scientist ensure that the analysis is timely, efficient, and effective.

B. The role of investigative information

Another issue that is currently the subject of much discussion in forensics is how much investigative information should be provided to the forensic scientist in the context of the requested analysis. When evidence is submitted for analysis, it is often accompanied by investigative information related to the case. However, scientists should be shielded from "domain irrelevant" information to minimize the risk of real or perceived bias in the outcome of the analysis (5). Precisely what constitutes "domain irrelevant" information, however, may vary in cases and disciplines. For example, the geographic origin of an evidence item may be considered domain irrelevant investigative information in a human crime, but it may be crucial to a wildlife analysis because it can allow the analyst to narrow the list of candidate species and formulate a logical analytical plan. Geographic range is a basic attribute of plant and animal species and an important part of the taxonomic description. Thus, information on geographic provenance enables the wildlife forensic scientist to select the appropriate method of analysis, as well as the appropriate suite of comparative reference samples. For example, knowledge of the source continent is valuable for analyzing species origin of bushmeat, which often lacks recognizable morphology. Similarly, case history information may be important for cause of death determinations, as discussed in the pathology section in this article.

IV. Wildlife forensic techniques: capabilities and challenges

A. Morphological analysis

Morphology is the study of form. We all use morphology to identify objects in our lives, from cars to cattle. Almost all analyses performed by a forensic wildlife morphologist are based on class characters, not individual characteristics. Shared quantitative and/or qualitative morphological characteristics are used by scientists to define taxonomic groups, such as families, genera, and species. Taxonomic keys and field guides are, in turn, based on these morphological characteristics. For example, the presence of webbed feet and a spatulate bill can be used to recognize the family Anatidae (ducks, geese, and swans). Morphological comparison is fundamental to classic studies of biological structure and evolution and is essential in the scientific work of taxonomists, anatomists, paleontologists, archaeologists, and forensic anthropologists. Definable class characters are reliably associated with evolutionary lineages down to the species level. Thus, for example, the pattern of spots and rosettes on the pelts of cheetah, leopard, and jaguar differ in consistent, species-diagnostic ways that allow the complete hides of these three species to be identified with certainty.

Individualization, in contrast, requires the recognition of characters uniquely identifying a particular individual. Even in species with considerable apparent individual variation (for example, the spotted cats listed above), research quantifying this morphological variation would be required to calculate the probability of a random match. Such data are almost never available. Therefore, individualization based on morphological characters is very rarely conducted in wildlife cases.

B. Capabilities

In the wildlife forensic context, morphology is used to identify wildlife parts and products typically to the family, genus, or species source by using observable physical features of the evidence sample. Depending on the nature of the evidence, a variety of macroscopic and microscopic comparison techniques may be employed. Morphological analyses are conducted by wildlife forensic scientists with extensive knowledge of the taxonomic group under examination (for example, plants, fish, reptiles, birds, or mammals), and of the variability of the characters to be examined. Access to a robust collection of reference specimens is essential for making morphological identifications.

C. Challenges

Partial evidence: The evidence associated with wildlife crime is often a part or product from an animal, fish, or plant. Generally, the larger the sample, the easier the species identification. Unfortunately, partial or highly-modified evidence is all too common in wildlife forensics, such as fillets of fish, blood from a trap, a jar of caviar, the ivory inlay of a violin bow, traditional Chinese medicinal preparations, carved objects of supposed rhinoceros horn or sea turtle shell, or cosmetics with whale oil or ambergris. These evidence types present diverse scientific challenges. The wildlife forensic scientist must decide the best approach to answer each question posed by investigators related to such evidence. The degree of difficulty for class characterization requests (that is, species identification) is exacerbated when one considers the vast numbers of wildlife, fish, and plant species.

Many of the partial evidence items listed above lack morphological characters for class characterization and must be identified by other techniques, such as DNA analysis. However, if morphological characters are present, partial remains can often be identified by an expert in the relevant taxonomic group. For example, determining the species of an adult bald eagle carcass is relatively easy, but determining if a single feather is from a bald eagle requires the forensic analyst to have: (1) extensive experience of within- and between-species variation in eagle feather patterns, (2) a robust reference collection of eagle plumes, and (3) knowledge of the species whose feathers resemble a bald eagle. To the inexperienced eye, the tail feathers of an immature bald eagle can resemble those of a golden eagle, which could lead to a faulty identification. All class character analyses likewise require detailed knowledge of the relevant taxa and an appropriate and extensive reference collection. Wildlife forensic labs should have explicit protocols on how to deal with class characterization requests related to potentially rare or novel species for which reference collections are minimal or absent. An extensive body of peer-reviewed literature exists establishing the scientific rigor and utility of morphological comparison techniques for partial, as well as complete, remains (6, 7, 8, 9, 10).

Subspecies identification: U.S. wildlife protection statutes frequently list protected taxa at the subspecies level. For example, 44 percent of bird taxa listed under the ESA are listed as subspecies (11). In contrast, only 1 percent of birds in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) appendices are listed at the subspecies level. The appropriateness of subspecies listings has been vigorously debated from a conservation perspective (12, 13). Subspecies listings also pose significant challenges for wildlife forensics.

The naming of subspecies is an attempt to categorize geographic variation. Subspecies are defined based on population-level analysis rather than the presence or absence of discrete characters.

Various attempts have been made to provide a statistical basis for the degree of differentiation needed to consider a population worthy of subspecies rank (14). There is no consensus—except, perhaps, that different groups require different standards, due to different levels of gene flow. Thus, there is inevitably an arbitrary component to the naming of subspecies.

The geographically-bound nature of subspecies makes them unsuitable for identification in the wildlife forensic context. Precise and reliable geographic source information is rarely available for items in wildlife trade. Further, the legal system rightly requires a high standard of certainty for taxonomic identifications used to prove a violation. This high standard is almost unattainable for subspecies identifications. Finally, some high profile taxa listed at the subspecies level, including argali and impala, are subject to interbreeding on game ranches, rendering subspecies characters unreliable. For all these reasons, prosecutions that rely on subspecies identifications are fraught with challenges.

D. Applications

Morphological identifications in wildlife forensics most often involve species of mammals, birds, and reptiles. A diverse variety of other organisms, including plants, invertebrates (for example, butterflies, shells, and coral), and amphibians are also regularly identified through morphological analysis when they appear as evidence in wildlife crime investigations. A few examples of high profile evidence items will illustrate the scope of morphology in wildlife forensics.

Ivory and rhino horn: Elephant ivory and rhinoceros horn are currently two of the highest profile wildlife products in illegal trade. The term “ivory” applies to any type of carvable dentine, and thus the teeth of walrus, sperm whales, hippopotamus, warthogs, and other species, as well as of extinct mammoths and mastodons, are all seen in the ivory trade, along with the tusks of different species of elephants. Identification to species is frequently critical to understanding whether a violation has occurred. The species source of a piece of ivory can often be identified by morphological analysis (15). In some cases, morphological and genetic analyses are conducted in collaboration, for example, to differentiate ivory from African versus Asian elephants. Similarly, morphological examination may verify that an object is composed of rhinoceros horn, followed by genetic analysis to determine the species of rhinoceros.

Hair and fur identification: In human forensics, “hair identification” is typically used to mean the individual matching of human hairs from, say, a suspect to a crime scene. However, individualization of hairs based on morphological characters is subject to a variety of errors and was strongly criticized in the 2009 NAS Report. In wildlife forensics, however, morphological hair identification is used not for individualization but for class characterization. Class character analysis of hair from the roughly 5,000 mammalian species is challenging, but does not lack scientific integrity. It is an essential technique for the identification of such wildlife products as fur coats (for example, those constructed of snow leopard, lynx, wolf, and sable) and shawls woven from the underfur of endangered Tibetan antelope.

Reptile leather: Products constructed of reptile leather, including footwear, handbags, belts, and watch bands are frequently seen in the wildlife trade. Many groups of reptiles are involved, including sea turtles, crocodilians, and numerous species of lizards and snakes. The tanning process renders genetic analysis of leather products challenging, and also requires destructive sampling. Therefore, most reptile leather identifications in wildlife forensics are based on morphological characters (16).

Oiled bird remains: Pits and ponds filled with waste fluids are often associated with energy and mining facilities. Bird remains recovered from such pits are often decomposed and contaminated, rendering them unsuitable for genetic analysis. Nevertheless, species identification is often possible using morphological characters that can be analyzed following cleaning (17).

Timber and CITES-protected woods: Species identification of logs, planks, and veneers is difficult because they lack the traditional plant morphological descriptors, such as leaves and flowers. An additional challenge is that many transnational timber shipments have no reliable information on geographic provenance. For these reasons, identification to genus is often the most specific taxonomic determination possible using wood anatomical features (18). However, an expanding body of data involving the identification of chemical components found in the “heartwood” allows for species-level identification of CITES-protected woods. This technique can currently identify the protected *Dalbergias* (App I & App II), *Aquilaria* (App II), *Swietenia* (App II), *Cedrela* (App II), *Caesalpinia* (App II), and the appropriate look-alike species (19, 20, 21, 22, 23).

V. Genetic analysis

A. Capabilities

It is important for attorneys and judges to understand the benefits and limitations of the different genetic analyses performed in wildlife cases. In wildlife forensics, genetic analyses may be used to determine the species source, individual identity, and sometimes geographic provenance of wildlife parts and products. Depending upon the investigative question and the nature of the evidence, several different genetic analyses may be performed. Like morphologists, wildlife forensic scientists who conduct genetic analyses must have an extensive knowledge of the general biology and phylogenetic relationships of a variety of taxonomic groups (24). Laboratory methods and instrumentation are common across taxonomic groups, and are the same as those used in human forensics. However, interpretation of the data produced must incorporate knowledge of the biology of the taxa in question (25). Much of this information can be obtained from the peer-reviewed literature, but sometimes the wildlife forensic scientist must use general knowledge from evolutionary biology, population and conservation genetics, and animal ecology to form conclusions from available data. Because genetic identification of species is not based on discrete, quantitative data and must take into account the biology of the species, completeness of the reference collection, and other factors, it is not suitable or possible to calculate statistics denoting “surety” of an analyst’s conclusion (as is common with human genetic analyses).

Degrees of variability in different parts of the genome determine the taxonomic level to which an item is identified, and whether an individual can be “matched” to another individual item or geographic source. In this way, some genetic characters are class characters, and other genetic characters are used for individualization. The class characters can determine the species of origin of an item while the individual characters can determine individual identity and family relationships. Depending on the species in question, class and/or individual characters can sometimes be used to determine geographic origin.

A critical element of all wildlife forensic genetic analyses is access to appropriately-vouchered reference samples and a robust reference database that is unique to each species of interest. To this end, most wildlife forensic laboratories maintain a large collection of in-house reference materials that consist of preserved tissues accompanied by confirmed information about species and geographic source. Similar to the mounted specimens used for comparative morphological identification, these preserved tissues allow the analyst to perform the same laboratory procedure on known samples and produce a DNA sequence or genotype that can be compared to sequences and genotypes acquired from evidentiary material. In a time of expanded worldwide wildlife trafficking, obtaining sufficient reference material from species that are or may be going extinct, or from species restricted to discrete areas of the world, is going to become more difficult. Investigators and prosecutors should identify genetic testing needs for an investigation as early as possible and consult with laboratories to ensure the existence of adequate reference materials prior to any request for analysis.

Mitochondrial DNA for species determination: Mitochondrial DNA (mtDNA) sequences form the basis of the class characters of genetic analysis and are commonly used in wildlife forensic analyses

for taxonomic identification to species, genus, family, and occasionally for determining geographic origin. This molecule, or genome, contains about 37 genes in animals, is present in cells as thousands of identical copies, and is inherited through the maternal lineage. Because mtDNA is relatively plentiful and resistant to degradation, it is particularly suitable for analysis of tissues that naturally have little DNA (horns, hair, feathers, antlers, bones, and ivory) and compromised or processed materials (feces, leathered and tanned hides, and food products) commonly encountered in wildlife investigations.

MtDNA sequencing is a validated technique, both in human and wildlife forensics (26, 27, 28, 29, 30). Data accumulated in the published record over the last several decades has shown that variation in the mtDNA sequence is inherited in consistent and predictable ways (31). Some mtDNA genes are highly “conserved,” meaning that they vary little even between higher taxonomic levels (for example, families). Other genes are less conserved, and show sequence variation within and between lower taxonomic levels (32, 33, 34).

In human forensics, the use of the mtDNA control region (35) is standardized in both data analysis and interpretation. However, the purpose of using that one genetic marker is to evaluate differences among individuals from the same species (*Homo sapiens*). Though it does not have the discriminatory power of simple tandem repeats (“STRs,” “DNA fingerprinting,” or “microsatellites”), it is used as a proxy for individualization.

In wildlife forensics, a number of different genetic markers from mtDNA are used to discriminate among different species and higher taxonomic levels. To identify the taxonomic source of an evidence item, DNA is extracted from it and sequenced at an appropriate gene, and this sequence is compared to the laboratory’s validated library of known sequences. When in-house reference databases lack key species, public databases such as GenBank and Barcode of Life present a practical choice and offer the advantage of compiling the work of many researchers. Analysts should be cautious of their shortcomings (25, 36, 37), and guard against them by: validating the chosen database using “known” samples, being knowledgeable in the statistical algorithms used to compare sequence data, and using their knowledge of the characteristics of the species of interest to select appropriate analytical criteria and comparative data. Barcode of Life’s reliance on a one-size-fits-all species identification algorithm and comparisons to data that is not always available for scrutiny also make it difficult to assess the soundness of the scientific methodology for forensic use. See *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 584–587 (1993). Having access to a variety of methods of analysis, rather than being locked into using one standard tool, is critical to the success of wildlife forensic species identification.

Nuclear DNA for individualization, population assignment, and sex determination: Nuclear DNA (nDNA) is another tool that is useful for forensic identification of wildlife. In contrast to mtDNA, nDNA provides both class characters and individual characters, and there is only one copy of the nuclear genome per cell. Because nDNA is less abundant than mtDNA, nDNA analysis is difficult or impossible in the degraded and low-DNA samples common in wildlife investigations (38). Like human forensics, wildlife forensics uses STRs as characters for individualization and population (geographic) assignment. STRs are fragments of nuclear DNA that vary significantly even between closely-related individuals (siblings, parents, offspring), and produce different composite “profiles” or “genotypes” (the suite of genetic characters unique to that individual) (39). The pattern of inheritance of these STR markers can be explicitly modeled, which allows the testing of alternate hypotheses for individual matching and population assignment in a quantitative framework. This means that, unlike the analysis of class characters, the power and accuracy of STR analyses can and should be calculated to give a statistical value to the “surety” or accuracy of a match. STR markers have been the core genetic markers for human genetic forensic investigations for several decades (40, 41), and the biological, statistical, and mathematical underpinnings for their use is similar for wildlife genetic forensics. However, there are several critical differences highlighted below.

STR analyses are generally species-specific, due to the high mutation rate of the genetic marker

of interest. This means that each species must have its own reference database that includes enough individuals from the target populations to enable robust estimation of population genetic characteristics. The STR analysis for human DNA forensics is different in that it requires a well-developed database for only one species (for example, the Combined DNA Index System), enabling database-sharing between forensic laboratories. Wildlife genetic forensics requires many databases for different species, which are often developed by each laboratory for the species they commonly examine. Use of STR data for individualization is a common request for wildlife forensic laboratories working on game species at both state and federal levels, and there is some sharing of those databases between laboratories. With the appropriate markers and an appropriate reference database, individual matching is fairly straightforward.

In forensic genetics, an important metric is the Probability of Identity (PID), the probability that the same STR genotype can be obtained from two randomly chosen individuals. If two samples match at all tested STR markers, a conservative estimate of PID can be calculated with a modest reference database for the target species. This is where the specific knowledge of the wildlife forensic analyst is of critical importance. Estimates of PID for individual comparisons of human DNA profiles are often expressed as extremely low probabilities of spurious matches (that is, one in more than several trillion). In contrast, PID estimates for animal populations may be higher due to biological or ecological characteristics of the species, such as low migration or dispersal rate (elk do not fly or drive), non-random mating, or low population abundance. Put simply, this means that individuals in a wildlife population are more likely to share STR characteristics than individuals in a human population. It is not unusual to obtain a PID estimate for elk in which the probability of two random individuals sharing the same STR genotype is around 1 in a few thousand. This would be a weak match in human forensic genetics, but a strong match in wildlife given that there may be only 300 elk in that particular population.

Genetic markers associated with the sex chromosomes of mammals and birds are used in a variety of ways in wildlife forensics. The most obvious use is identification of the sex of an animal when hunting seasons are designated separately for males and females. For example, states may regulate buck and doe seasons for deer or tom and hen seasons for turkey. Sex determination may also be used to provide corroborating data in individual matching analyses and pedigree determinations.

B. Challenges

The immense biological diversity and vast geographic habitats of non-human life on this planet provide a number of challenges for wildlife forensic genetics. Identifications of subspecies and of hybrids are two areas in which wildlife genetic forensics experiences the greatest difficulty, primarily because of the inability to: (1) obtain verified reference samples of the suspected subspecies, and (2) use appropriate genetic markers to detect hybrid species. Identification of mixture samples is a challenge in wildlife forensic genetics but, unlike a human DNA mixture analysis, rarely involves more than determining the species of the contributors and identifying that a mixture is present.

Identification of subspecies or populations: Identification of subspecies (for example, Common impala *Aepyceros melampus melampus* and Black-faced impala *A. m. petersi*) or populations (for example, Snake River sockeye salmon and Columbia River sockeye salmon) is just as problematic for wildlife forensic genetics as it is for wildlife morphologists, as discussed above. Genetic markers used for species identification represent characters that are inherited over generations. However, those genetic markers were chosen for identification of species or individuals, not necessarily for identification of populations that form the basis for defining a particular subspecies. Without appropriate reference material, it can be impossible to identify genetic markers that vary at the subspecific taxonomic level in a detectable way. If, however, adequate databases are available, and sufficient genetic differentiation between populations is detected, evidence can be “assigned” to a certain population using statistical analyses.

Hybrid species detection: Because mtDNA is only inherited through the maternal lineage, it does not provide information about the source of the male parent. Some closely-related species (for example, shovelnose sturgeon and pallid sturgeon) may hybridize in nature due to changes in their range brought about by environmental alterations. Others may be forcibly hybridized through aquaculture or farming practices for commercialization activities (for example, Eurasian sturgeon for the caviar trade, common and black-faced impala for African sport hunting). Wildlife protection laws generally cover a particular species, and because hybrids are a mix, they are often not regulated. While an analyst may bolster a conclusion about species identity with literature references regarding the absence or low rate of occurrence of hybrids in the taxon in question, forensic analysis can seldom conclusively prove or disprove the hybrid identity of an organism in a way that would survive a legal challenge.

Mixture samples: The genetic analysis of mixture samples is occasionally requested in instances of human-animal interactions, such as maulings; determination of multiple species in processed foods, such as sausages, soups, and stews; and possible mixtures of blood spatter on objects, such as rifle cases, clothing, and leaves. Determination of the species source of mixture samples is not a difficult procedure if species-specific genetic markers are available to the analyst. For example, in a bear mauling case, the human DNA from a wound could be easily identified with human-specific genetic markers, and the bear component (saliva on the wound or clothing) with bear-specific genetic markers. In the event that mixtures of biological material from individuals of the same species are encountered, interpretation of the data is generally limited to reporting the presence of more than one individual, or reporting the number of shared alleles (genetic “types”) in a mixture. This type of analysis is limited to the availability of appropriate genetic markers and reference databases for the target species. In contrast to human forensics, wildlife forensic geneticists do not estimate the relative contribution of individuals to a mixture sample.

Destructive testing: Many wildlife products are expensive, one-of-a-kind items, such as sea turtle inlays on violin bows, Japanese netsuke carvings, Victorian ivory antiques, and ivory laminates on piano keys. These luxury items can also be manufactured with synthetic look-alike materials, and to distinguish the authentic from the imitation requires destructive testing. Sampling the handles of Victorian cutlery, or determining if a netsuke was carved from elephant or hippopotamus ivory, could diminish the value of the object in question. Investigators and prosecutors should discuss these issues with forensic scientists and investigators before asking for analyses that would require destructive testing.

C. Applications

Species identification: Species identification of wildlife parts and products is often performed using DNA sequence analysis if the item in question lacks sufficient identifying morphological characters (for example, blood stains, processed meat or fish fillets, a decomposed carcass, a carved object such as a libation cup or ivory netsuke). DNA-based taxonomic identification allows the investigator to determine if a violation occurred (such as illegal take of an African elephant), to uncover fraud (for example, mislabeling of seafood), or expose a previously unsuspected violation (such as blood spot originated from a bald eagle, not a legal deer). Analytical results can also result in dismissal of charges when suspected violations are not borne out (for example, suspected whale meat turns out to be cow). Investigative aims and the relevant statutes can inform what analyses occur in the lab. All whales are protected under the Marine Mammal Protection Act, but only a subset is additionally protected under the ESA. Whale bones can often be morphologically identified to the order Cetacea (whales), indicating an MMPA violation, but if the investigator is seeking an ESA violation, DNA analysis is required to determine if the bone originated from an endangered species of whale. These types of identifications can also be made in covert sales cases to document the species origin of an object in trade (for example, a black bear gall bladder) before a controlled transaction, and then confirm the species of the item when it is intercepted or seized.

Individual matching: Individual matching in wildlife forensics is used to determine whether

two collections of biological material are from the same individual (for example, gut pile and seized elk, eagle carcass and eagle feathers), or to identify the minimum number of individuals in, for example, a mixed-use fishery. In these cases, a probability of identity can often be estimated from the available reference database. The use of individual matching as a way to trace items used in covert operations is limited by the availability of a reference database for the species in question. Such capabilities, or lack thereof, should be determined by prosecutors and investigators at the outset of any investigation.

VI. Pathology analysis

A. Capabilities

Determination of the cause of death is an important part of a forensic wildlife investigation. The examination of a dead body may be referred to as a “necropsy,” an “autopsy,” or a “post-mortem examination.” Necropsy is typically used in the field of veterinary medicine, but the three terms can be used interchangeably. The goals of a veterinary forensic necropsy are essentially the same as a medical forensic necropsy: to determine the cause of death and any contributing factors, collect trace evidence, and aid in reconstructing the circumstances surrounding the death. The veterinary pathologist is specially trained to conduct and interpret post-mortem examinations. A veterinary pathologist, like his or her medical counterparts, will have completed a doctoral (veterinary) degree and residency training in pathology. Veterinary pathologists must then pass a certifying examination to be a boarded member of the American or European College of Veterinary Pathology. Veterinary pathology training is broad in terms of species and systems. At this time, there is no veterinary residency training specific to forensic pathology. While veterinary medical training gives veterinary clinicians the experience necessary to conduct necropsies, the trained pathologist will be best qualified to examine bodies both grossly and microscopically, and to interpret findings.

Pathology differs from other forensic disciplines mainly in a lack of reference standards and measurements. Injuries and diseases do not typically manifest uniformly or quantifiably between individuals, so the pathologist must rely on training and experience to interpret examination findings. Another unique inquiry for the pathologist is in the specimen’s history. Rather than introducing bias, a history can be vital in formulating an opinion as to the cause of death, planning for the appropriate ancillary tests, and ensuring that all of the investigator’s questions are addressed (42). Two examples illustrate this point: a diagnosis of drowning often relies on the necropsy findings in conjunction with circumstantial evidence; likewise, a knowledge that rabies is suspected in a gunshot case will ensure that rabies testing is included in the work-up (43).

The necropsy examination: Visual examination of the body (known as a gross necropsy or gross autopsy) consists of a complete external and internal examination. The internal examination is accomplished by opening and evaluating body cavities and organs. Weighing of all organs, as done in the human autopsy, is not routine in a veterinary necropsy due to the variety of species encountered and lack of reference ranges. During the necropsy, abnormalities are noted and photographed. Trace evidence is retrieved. Depending on the carcass condition and findings, tissues may be saved for disease or other testing. However, because a necropsy is essentially a non-repeatable test, the written notes, saved tissue samples, photographs, and x-ray images are what remain as the evidence for use in court (44).

A thorough necropsy examination should include X-rays (radiographic imaging). From a forensic perspective, radiographs are most useful for locating metal bullet fragments and traumatic fractures. In some cases, bullet fragmentation may be such that small pieces cannot be readily retrieved. Images in these cases become an important part of the evidence.

Microscopic examination of tissues (histopathology) tends to yield less diagnostic information in a forensic case than in an infectious disease case, but is still a valuable part of a necropsy and

recommended for all litigation-related autopsies (45). Microscopic examination can help to age wounds, provide an assessment of the animal's health at the time of death, and determine the cause of death when gross findings alone are not explanatory (42, 44). Some types of poisons, such as antifreeze, cause characteristic microscopic changes. Given the spectrum of decomposition that the wildlife pathologist may encounter, microscopic examination is not always feasible. Tissues may, for example, be too desiccated to yield a readable slide.

The pathology report: The pathology report will likely include a written description of findings, an interpretation of the findings, and a cause of death. In multifactorial cases, a distinction may be made by the pathologist between "proximate" and "immediate" cause of death. The proximate cause of death is the initial event in the chain of events leading to death. The immediate cause of death is the injury or disease process occurring at the time of death (46). For example, a bald eagle is taken to a veterinary clinic after being shot in the wing. The veterinarian diagnoses a severe infection at the site of the wound. Because the prognosis is poor, the veterinarian decides to euthanize the eagle. In this case, the immediate cause of death is euthanasia, but the proximate cause of death is gunshot.

Time of death: Veterinary pathologists may be asked to give an opinion as to the time of death. In human forensic investigations, body temperature, rigor mortis, gastric emptying time, vitreous humor chemistry, scene clues, and/or forensic entomology may be used to determine time of death (45). Most of these methods are of limited use to the veterinary pathologist, who is most likely receiving a carcass that has been taken from the scene and possibly frozen prior to shipment. Nor can the time of death for wildlife be reliably extrapolated from studies on human cadavers. Some research has been done on early post-mortem changes in dogs, deer, and pigs, but may not be applicable to other species (47). Because of these complicating factors, a pathologist may only be able to give a rough time of death estimate (such as hours, days, or weeks) based on the condition of the body. Forensic entomology shows promise as a method of establishing minimum postmortem interval in wildlife. Scene documentation, on-site insect collection, and consultation with a forensic entomologist are needed to provide the most accurate estimate (48).

B. Applications

Industry: This broad category refers to deaths that may be associated with industrial operation and facilities, most commonly those associated with oil, natural gas, solar power, wind power, energy distribution (power lines), and mining operations. The ways in which these practices endanger wildlife are legion, ranging from collisions with wind turbines to entrapment within an oil spill to solar flux-related burns (17, 49). The pathologist can form an expert opinion in these cases based not only on what is present on or in the carcass, but also on the absence of evidence of another cause of death. Knowledge of the history and natural behaviors of the species in question are also used to formulate the pathologist's opinion as to the cause of death.

Projectiles: Necropsy examination of firearm and arrow-related deaths ideally result in a determination of the cause of death, but also result in the recovery of projectile/fragments and determination of direction and distance from which they originated. Radiographic imaging is extremely helpful in these cases for determining the presence and location of fragments, and documenting the extent of the injury. Small, metal fragments that cannot be seen with the naked eye may be visible in radiographs. Metal fragments in fractured bones may allow for a gunshot diagnosis in cases in which only bones remain. Estimates of projectile size can be made when there are holes in bone, though not in skin or other soft tissues, due to their distensible nature.

Poisoning: Death following consumption of poison bait or secondary ingestion of poisoned target species (such as rats) can present a diagnostic challenge as, for the most part, poisons leave few to

no visible signs on the body (50). In these cases, some knowledge of the history and communication with the investigator can be crucial to narrow the list of suspected poisons, ensuring that the most appropriate tissues and test(s) are used. Detection of poison on or in the carcass is necessary to determine the cause of death with a high level of certainty. Making a definitive diagnosis based only on odor or “death posture” is not acceptable.

Miscellaneous trauma: Other types of trauma can sometimes be easily diagnosed based on wound characteristics, such as crush injuries from leg-hold traps. Collisions with stationary or moving objects often result in obvious injury. However, particularly in small birds, trauma severe enough to be fatal may be harder to detect or not seen at all (51). Diagnosis of collision trauma in these cases depends on the history and the absence of another identifiable cause of death.

VII. Conclusion

Wildlife forensic scientists provide critical information to wildlife law enforcement investigations and prosecutions, including taxonomic identifications, individual matching, and cause-of-death determinations, as well as expert witness testimony to the courts. To maximize the utility and success of wildlife forensic science in proceedings, investigators and prosecutors should discuss with the laboratory, as soon as possible, any needs and concerns relative to availability of reference material, evidence sampling (including any issues related to split sampling), retention of evidence for future analyses, destructive testing, limitations of the proposed testing, applicable statutes, contents of the case file, discovery obligations, and the strength of the interpretations and conclusions to the burden of proof.

Practitioners in the field are engaged in advancing both the rigor of their science and public understanding of their work. Wildlife forensic science has evolved into a mature profession that incorporates multidisciplinary fields with an international reach. The community of wildlife forensic scientists has worked together to produce a set of standards and guidelines, a pathway to certification, a proficiency testing system, and a code of ethics for practitioners in the field. This effort is recognized by the inclusion of Wildlife Forensics as a subcommittee in the structure of the Organization of Scientific Area Committees under the National Institute of Standards and Technology’s (NIST) Forensic Science Standards Board. Wildlife forensic science provides a valuable service to the legal and judicial arenas by applying well-established analytical techniques from the disciplines of morphology, genetics, and pathology to diverse, and often novel, wildlife evidence. With increased recognition of the worldwide environmental and economic toll of wildlife crime, wildlife forensic science will play an increasingly important role in law enforcement.

VIII. References

1. NAT’L RESEARCH COUNCIL, NAT’L ACADEMY OF SCIENCES, *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* 254 (2009).
2. SCIENTIFIC WORKING GROUP FOR WILDLIFE FORENSIC SCIENCES, *STANDARDS AND GUIDELINES* 15 (2012).
3. SCIENTIFIC WORKING GROUP FOR WILDLIFE FORENSIC SCIENCES, *SCIENTIST CERTIFICATION SCHEME* 4 (2012).
4. SCIENTIFIC WORKING GROUP FOR WILDLIFE FORENSIC SCIENCES, *RECOMMENDATIONS FOR SWFS FORENSICS CERTIFICATION POLICY AND PROCEDURES* 16 (2012).
5. Dror, I., *Practical Solutions to Cognitive and Human Factor Challenges in Forensic Science*, 4 *FORENSIC SCI. POL’Y & MGMT.* 1, 9 (2013).
6. Brazaitis, P., *The Forensic Identification of Crocodilian Hides and Products*, in *CROCODILES:*

THEIR ECOLOGY, MANAGEMENT, AND CONSERVATION 17–43 (1989).

7. POWELL, R., COLLINS, J.T. & HOOPER, JR. E.D., A KEY TO THE AMPHIBIANS AND REPTILES OF THE CONTINENTAL UNITED STATES AND CANADA (1998).
8. PYLE, P., IDENTIFICATION GUIDE TO NORTH AMERICAN BIRDS: PART I (1997).
9. PYLE, P., IDENTIFICATION GUIDE TO NORTH AMERICAN BIRDS: PART II (2008).
10. NOWAK, R. & WILSON, D., WALKER'S MAMMALS OF THE WORLD, VOLUMES I & II (1999).
11. Haig, S. & D'Elia, J., *Avian Subspecies and the U.S. Endangered Species Act*, 67 ORNITHOLOGICAL MONOGRAPHS 24, 30 (2010).
12. Phillimore, A. & Owens, I., *Are subspecies useful in evolutionary and conservation biology?*, 273 PROC. OF THE ROYAL SOC'Y OF LONDON B, 1049, 1050 (2006).
13. Fitzpatrick, J.W., *Subspecies are for convenience, not strict science*, 67 ORNITHOLOGICAL MONOGRAPHS 54, 59 (2010).
14. Patten, M., *Null Expectations in Subspecies Diagnosis*, 67 ORNITHOLOGICAL MONOGRAPHS 35, 40 (2010).
15. EDGARD O. ESPINOZA & MARY-JACQUE MANN, IDENTIFICATION GUIDE FOR IVORY AND IVORY SUBSTITUTES 6 (1991).
16. Martin, D.L., *Identification of Reptile Skin Products Using Scale Morphology*, WILDLIFE FORENSICS: METHODS AND APPLICATIONS 161–199 (Jane E. Huffman & John R. Wallace eds., 2012).
17. Trail, P.W., *Avian mortality at oil pits in the United States: a review of the problem and efforts for its solution*, 38 ENVT'L MGMT. 532–544 (2006).
18. Gasson, P., Baas, P. & Wheeler, E.A., *Wood anatomy of CITES-listed tree species*, 32 IAWA J. 155–197 (2011).
19. Lancaster, C. & Espinoza, E.O., *Analysis of Select Dalbergia and trade timber using direct analysis in real time and time-of-flight mass spectrometry for CITES enforcement*, 26 RAPID COMM. IN MASS SPECTROMETRY 1147–1156 (2012).
20. Lancaster, C. & Espinoza, E., *Evaluating agarwood products for 2-(2-phenylethyl)-chromones using direct analysis in real time time-of-flight mass spectrometry*, 26 RAPID COMM. IN MASS SPECTROMETRY 2649–2656 (2012).
21. Espinoza, E.O., Lancaster, C.A., Kreitals, N.M., Hata, M., Cody, R.B. & Blanchette, R.A., *Distinguishing wild from cultivated agarwood (Aquilaria spp.) using direct analysis in real time (DART™) and time-of-flight mass spectrometry*, 28 RAPID COMM. IN MASS SPECTROMETRY 281–289 (2014).
22. Espinoza, E.O., Wiemann, M.C., Barajas-Morales, J., Chavarria, G.D. & McClure, P.J., *Forensic analysis of CITES protected Dalbergia timber from the Americas*, 36 INT'L ASS'N OF WOOD ANATOMISTS J. (2015).
23. McClure, P.J., Chavarria, G.D. & Espinoza, E.O., *Metabolome chemotypes of CITES protected Dalbergia timbers from Africa, Madagascar and Asia*, RAPID COMM. IN MASS SPECTROMETRY (2015).
24. Ogden, R., *Forensic science, genetics and wildlife biology: getting the right mix for a wildlife DNA forensics lab*, 6 FORENSIC SCI., MED., & PATHOLOGY 172–179 (2010).

25. Moore, M.K. & Kornfield, I.L., *Best practices in wildlife forensic DNA*, WILDLIFE FORENSICS: METHODS & APPLICATIONS 201–236 (Huffman, J. & Wallace, J. eds., 2012).
26. Bartlett, S.E. & Davidson, W.S., *FINS (Forensically Informative Nucleotide Sequencing): a procedure for identifying the animal origin of biological samples*, 12 BIOTECHNIQUES 408–411 (1992).
27. Dawnay, N., Ogden, R., McEwing, R., Carvalho, G.R. & Thorpe, R.S., *Validation of the barcoding gene COI for use in forensic genetic species identification*, 173 FORENSIC SCI. INT’L 1–6 (2007).
28. Holland, M.M. & Parsons, T.J., *Mitochondrial DNA sequence analysis—validation and use for forensic casework*, 11 FORENSIC SCI. REV. 21–50 (1999).
29. Wilson, M.R., DiZinno, J.A. & Polansky, D., *Validation of mitochondrial DNA sequencing for forensic casework analysis*, 108 INT’L J. OF LEGAL MED. 68–74 (1995).
30. Wilson, M.R., Holland, M.M., Stoneking, M., DiZinno, J. & Budowle, B., *Guidelines for the use of mitochondrial DNA sequencing in forensic science*, 20 CRIME LABORATORY DIGEST 68–77 (1993).
31. Birky, Jr. C.W., *The inheritance of genes in mitochondria and chloroplasts: laws, mechanisms, and models*, 35 ANN. REV. OF GENETICS 125–1248 (2001).
32. Vawter, L. & Brown, W.M., *Nuclear and mitochondrial DNA comparisons reveal extreme rate variation in the molecular clock*, 234 SCI. 194–196 (1986).
33. Avise, J.C., Arnold J., Ball, R.M., Bermingham, E., Lamb, T., Neigel, J., Reeb, C. & Saunders, N., *Intraspecific phylogeography—the mitochondrial-DNA bridge between population genetics and systematics*, 18 ANN. REV. OF ECOLOGY & SYSTEMATICS 489–522 (1987).
34. Moritz, C., Dowlin, T.E. & Brown, W.M., *Evolution of animal mitochondrial DNA: relevance for population biology and systematics*, 18 ANN. REV. OF ECOLOGY & SYSTEMATICS 269–292 (1987).
35. Budowle, B., Wilson, M.R., DiZinno, J.A., et al., *Mitochondrial DNA regions HVI and HVII population data*, 103 FORENSIC SCI. INT’L 23–35 (1999).
36. Collins, R.A., Cruickshank, R.H., *The seven deadly sins of DNA barcoding*, 13 MOLECULAR ECOLOGY RESOURCES 969–975 (2012).
37. Rubinoff, D., *Utility of mitochondrial DNA barcodes in species conservation*, 20 CONSERVATION BIOLOGY 1026–1033 (2006).
38. Foran, D.R., *Relative degradation of nuclear and mitochondrial DNA: an experimental approach*, 51 J. OF FORENSIC SCI. 766–70 (2006).
39. Blouin, M.S., Parsons, M., LaCaille, V., Lotz, S., *Use of microsatellite loci to classify individuals by relatedness*, 5 MOLECULAR ECOLOGY 393–401 (1996).
40. Collins, P.J., Hennessy, L.K., Leibelt, C.S., Roby, R.K., Reeder, D.J. & Foxall, P.A., *Developmental validation of a single-tube amplification of the 13 CODIS STR loci, D2S1338, D19S433, and amelogenin: the AmpFI STR Identifiler PCR Amplification Kit*, 49 J. OF FORENSIC SCI. 1265–1277 (2004).
41. Lygo, J.E., Johnson, P.E., Holdaway, D.J., Woodroffe, S., Whitaker, J.P., Clayton, T.M., Kimpton, C.P. & Gill, P., *The validation of short tandem repeat (STR) loci for use in forensic casework*, 107 INT’L J. OF LEGAL MED. 77–89 (1994).

42. Lochmuller, C.M., *The importance of histological evaluation in death investigation*, 32 AM. J. OF FORENSIC MED. & PATHOLOGY 266–268 (2011).
43. DiMAIO, V.J.M., DiMAIO & D., FORENSIC PATHOLOGY (2d ed. 2001).
44. Gerdin, J.A. & McDonough, S.P., *Forensic pathology of companion animal abuse and neglect*, 50 VETERINARY PATHOLOGY 994–1006 (2013).
45. KNIGHT’S FORENSIC PATHOLOGY (Saukko, P. & Knight, B. eds., 3d 2004).
46. DOLINAK, D., MATSHES, E. & LEW, E., FORENSIC PATHOLOGY PRINCIPLES AND PRACTICE (2005).
47. Munro, R. & Munro, H., *Some challenges in forensic veterinary pathology: a review*, 149 J. OF COMPARATIVE PATHOLOGY 57–73 (2013).
48. Campobasso, C.P. & Introna, F., *The forensic entomologist in the context of the forensic pathologist’s role*, 120 FORENSIC SCI. INT’L 132–139 (2001).
49. KAGAN, R.A., VINER, T.C., TRAIL, P.W. & ESPINOZA, E.O., AVIAN MORTALITY AT SOLAR ENERGY FACILITIES IN SOUTHERN CALIFORNIA: A PRELIMINARY ANALYSIS (2014).
50. MERCK, M.D., VETERINARY FORENSICS: ANIMAL CRUELTY INVESTIGATIONS (2007).
51. Cousins, R.A., Battley, P.F., Gartrell, B.D., Powlesland, R.G., *Impact injuries and probability of survival in a large semiurban endemic pigeon in New Zealand, Hemiphaga novaeseelandiae*, 48 J. OF WILDLIFE DISEASES 567–574 (2012). ❖

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Civil and Administrative Remedies for Wildlife and Plant Violations

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I. Introduction

Most federal wildlife laws contain a mix of criminal, civil, and administrative enforcement provisions. For instance, the Endangered Species Act (ESA) contains criminal penalties, administrative penalties, civil injunctive relief, and all three types of forfeiture—criminal, civil, and administrative. Although the availability of civil and administrative penalties in the federal wildlife statutes should not deter prosecution when criminal sanctions are appropriate, there may be times when non-criminal enforcement options are best suited for the circumstances at hand. At other times, parallel criminal and civil or administrative enforcement may be warranted.

This article sets out civil and administrative enforcement options available under the federal wildlife statutes so that prosecutors can evaluate whether these tools should be used instead of, or in conjunction with, a criminal proceeding in a particular case. Those options include: (1) civil injunctive relief, when the illegal activity is imminent or ongoing and an injunction could prevent or stop the illegal acts and associated environmental harm, (2) civil or administrative penalties, where the available proof cannot support a criminal charge or the criminal violation is very limited, (3) broad forfeiture authorities

to deter crime and promote legal compliance, and (4) nonmonetary administrative sanctions and administrative enforcement actions. Each of these options is covered in the sections below.

II. Civil injunctive relief

Few environmental laws expressly provide for injunctive relief. However, for those that provide only administrative enforcement by the applicable implementing agency or only criminal enforcement, and do not contain express civil injunctive remedies, such relief may still be available under the general enforcement authority of the United States. For information on whether such injunctive remedies apply, contact the Wildlife and Marine Resources Section.

Civil injunctive relief may be appropriate when violations of environmental laws are ongoing or imminent. The ESA is the main statute that provides civil injunctive authority for offenses related to wildlife listed as endangered or threatened. Congress enacted the ESA out of concern for the extent to which “various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.” 16 U.S.C. § 1531(a)(1) (2015). The ESA is “comprehensive legislation” that contains both substantive and procedural requirements to conserve endangered and threatened species and the ecosystems that they depend on. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978) (*TVA*). The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Babbitt v. Sweet Home Chapter of Communities for a Great Or.*, 515 U.S. 687, 698 (1995) (citation omitted). Its passage marks Congress’s commitment “to halt and reverse the trend toward species extinction, whatever the cost.” *TVA*, 437 U.S. at 184. *See also Sweet Home*, 515 U.S. at 698–99 (quoting *TVA* with approval).

Section 11(e)(6) of the ESA permits the Attorney General of the United States to seek to enjoin any person who is alleged to be in violation of the ESA or its implementing regulations. 16 U.S.C. § 1540(e)(6) (2015). The Attorney General delegated this authority to the Wildlife and Marine Resources Section. *See DEP’T OF JUSTICE, UNITED STATES ATTORNEYS’ MANUAL* § 5-10.120 (2014). This authority can be critical to the purpose of the ESA, which provides civil injunctive relief for violations of its taking and trafficking prohibitions.

A. Injunctions under ESA’s taking prohibition

Most of the existing case law on civil injunctive remedies addresses violations of the ESA’s “take” prohibition, which prohibits any person from taking an endangered species and, via regulation, from taking certain threatened species. 16 U.S.C. § 1538(a)(1)(B) (2015) (endangered species); *id.* § 1533(d) (threatened species). The term “take” is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Id.* § 1532(19). The Supreme Court explained that “[t]ake” is defined . . . in the broadest possible manner to include every conceivable way in which a person can ‘take’ or attempt to ‘take’ any fish or wildlife.” *Sweet Home*, 515 U.S. at 704 (citation omitted). The term “harm” is defined by regulation as “an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” *See* 50 C.F.R. § 17.3 (2015). Although courts are mixed on this issue, some circuits permit the Government to demonstrate significant habitat modification as the basis for a violation. Therefore, while most “take” cases involve direct actions that kill or injure the animals themselves, take may also arise indirectly through violations of habitat because of the broad definition of “harm.” Examples of this type of take are included in the bullets below. “Harass” also is defined broadly by regulation as “an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” *Id.* The term “person” includes “any State, municipality, or political

subdivision of a State; or any other entity subject to the jurisdiction of the United States.” 16 U.S.C. § 1532(13) (2015).

Given this statutory and regulatory context, courts have set out three elements to a civil injunctive ESA take claim: (1) an imminent threat of a future take (or a take that is reasonably certain to continue) of an endangered or threatened species, (2) an animal has actually been or is likely to be killed or injured, and (3) the death or injury was or would be proximately caused by the defendant. *See Sweet Home*, 515 U.S. at 702–03; *Aransas Project v. Shaw*, 775 F.3d 641, 656 (5th Cir. 2014) (“Proximate cause and foreseeability are required to affix liability for ESA violations.”). *See also* 16 U.S.C. § 1540(e)(6) (2015) (authorizing United States to obtain injunction against one who is “in violation” of the ESA); *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 784 (9th Cir. 1995). An entity that authorizes a take may also be liable. *Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir. 1997) (“The statute not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that bring about the acts exacting a taking.”); *United States v. Town of Plymouth*, 6 F. Supp. 2d 81, 90 (D. Mass. 1998) (quoting *Strahan*, 127 F.3d at 163).

Deliberate and incidental takings: The ESA taking prohibition applies to a person who deliberately acts to take a species, as well as a person whose actions are not intended or designed to take species listed under the ESA, but who may nevertheless take species incidentally. Some examples of successful take cases (including those brought as citizen-suit actions, rather than by the United States), include:

- **Off-road vehicles:** In *United States v. Town of Plymouth*, 6 F. Supp. 2d 81, 90 (D. Mass. 1998), the district court enjoined off-road vehicles from driving on the beach unless the Town of Plymouth imposed buffers around the nests and broods of piping plovers (a bird listed as threatened). The court held unlawful take occurred because the birds were killed by “blunt trauma” from vehicle strikes and their nesting and feeding habitat was adversely modified” by those vehicles during the breeding season. *Id.* at 87, 91. Similarly, in *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1181–82 (M.D. Fla. 1995), the court found that authorization of nighttime driving of off-road vehicles caused a taking of protected sea turtles. The court enjoined nighttime driving until a trial on the merits, even though the county was currently applying for an incidental take permit, further discussed below, from the U.S. Fish and Wildlife Service.
- **Irrigation pumping station:** The court enjoined the operation of an irrigation pumping station entraining fish. The operation of the station annually killed approximately 400,000 to 10 million juvenile, threatened winter-run chinook salmon. The court enjoined the water district from operating its pumping station during the peak downstream migration season each year. *United States v. Glenn-Colusa Irrigation Dist.*, 788 F. Supp. 1126, 1130, 1136 (E.D. Cal. 1992).
- **Wind farm:** Courts have enjoined wind farm construction to prohibit takes of bats. In a recent case in Maryland, absent agreement by the parties on another acceptable arrangement, the court enjoined the wind turbines during months when the bats were not hibernating and enjoined construction of additional turbines. *Animal Welfare Inst. v. Beech Ridge Energy LLC*, 675 F. Supp. 2d 540, 563–565 (D. Md. 2009) (holding that wind energy project would “take” Indiana bats in violation of ESA, even though predicated on wholly future takes, and applying preponderance of the evidence “reasonably certain to imminently harm, kill, or wound the listed species” standard).
- **Trapping:** A court ordered that a state modify its licensing of trapping of other animals in core lynx areas because the trapping ensnared endangered lynx, as evidenced by the 10 lynx that had already been taken by legally set traps. The court ordered the state to apply for an incidental take permit or to take action to eliminate the incidental taking of lynx through trapping activities in

core lynx ranges. *Animal Prot. Inst. v. Holsten*, 541 F. Supp. 2d 1073, 1080–81 (D. Minn. 2008) (holding that Minnesota Department of Natural Resources violated § 9 of the ESA by authorizing trapping and snaring that could result in future takings of the protected Canada Lynx).

- **Gillnets:** A court found that gillnets or lobster pots used in commercial fishing exacted an ESA take, where right whales showed scars from previous encounters with the devices. The court ordered the State of Massachusetts to consider a means by which the use of gillnets and lobster pots may be modified to avoid takings in its coastal waters. It explained that the causation, “while indirect, is not so removed that it extends outside the realm of causation as it is understood in the common law.” *Strahan v. Coxe*, 127 F.3d 155, 164, 168 (1st Cir. 1997) (Indirect causation is sufficient because it is “not possible for a licensed commercial fishing operation to use its gillnets or lobster pots in the manner permitted by the Commonwealth without risk of violating the ESA by exacting a taking.”).
- **State game management:** A court held that a state’s maintenance of sheep and goats for hunting purposes in the critical habitat of an endangered bird species constituted a taking because the state’s management practices caused destructive impact on the birds’ habitat. The court ordered the parties to attempt to agree to an injunction whereby the state resources agency would adopt a program to eradicate the sheep and goats, and it was enjoined from taking any action to maintain or increase the population of sheep and goats. *Palila v. Haw. Dep’t of Land & Natural Res.*, 639 F.2d 495, 489, 497 (9th Cir. 1981); *Palila v. Haw. Dep’t of Land & Natural Res.*, 471 F. Supp. 985, 999 (D. Haw. 1979).

Incidental take permit: People are not wholly prohibited from taking endangered species. *See* 16 U.S.C. § 1539 (2015). In some cases, such as the trapping case above, a defendant may be encouraged to apply for an “incidental take permit” under ESA’s § 10 to avoid liability for taking protected species. This safe harbor exempts from liability those takes that occur pursuant to the permit’s terms. Incidental taking of listed species that does not jeopardize the continued existence of that species may be authorized by the Secretary of the Interior (or Commerce) pursuant to this incidental take permit. Take that is in compliance with the terms and conditions set forth in a § 10 incidental take permit is exempted from the take prohibition and is lawful.

Incidental take permits are issued along with an approved Habitat Conservation Plan that often places obligations on the permittee to provide mitigation for habitat destruction that may occur because of its activities. *See* 16 U.S.C. § 1539(a)(2) (2015); 50 C.F.R. § 17.22 (2015). A goal of a civil injunctive proceeding under the ESA may be to encourage the defendant to apply for an incidental take permit to allow the take of some species, but to require mitigating and other conditions on the defendants’ intended activities.

Once you have identified a potential civil ESA violation, please contact the Wildlife and Marine Resources Section to seek advice on how to best craft your case and your requested injunctive relief.

B. Injunctions under ESA’s trafficking prohibitions

The ESA’s trafficking prohibition makes it unlawful to “import . . . or export,” “deliver, receive, carry, transport, or ship,” and “sell or offer for sale in interstate commerce” any “ESA-listed species.” 16 U.S.C. § 1538(a)(1)(A), (E), (F) (2015). In the United States, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international treaty governing trade in threatened and endangered species, is implemented through the ESA, which prohibits “trade in any specimens contrary to the provisions of [CITES].” *Id.* § 1538(c)(1). Thus, trafficking in either CITES-listed or ESA-listed species is unlawful. These prohibitions may be enforced through a civil injunctive proceeding under the same authority as takes under the ESA. *Id.* § 1540(e)(6).

A search of publicly available databases revealed no trafficking-related injunction actions. A trafficking-related injunction could serve a deterrent effect to prevent further illicit conduct. For example, a dealer in endangered species who has previously been the subject of a civil forfeiture action, and continues to import without the required permits, could be the subject of civil injunctive relief for violations of CITES, the ESA, or both.

The district court in the Eastern District of Virginia explained the elements of a CITES violation (although it was a civil forfeiture action, discussed more fully below) and, by analogy, an ESA trafficking violation. The court found a violation of CITES and the ESA because the wood at issue was: (1) listed on an appendix to CITES, (2) imported without the required Certificate of Origin, and (3) not subject to any exception to the Certificate of Origin requirement. *United States v. 1866.75 Board Feet and 11 Doors and Casings, More or Less, of Dipteryx Panamensis Imported From Nicaragua*, 587 F. Supp. 2d 740, 744, 746 (E.D. Va. 2008), *aff'd sub nom.*, *United States v. Thompson*, 332 F. App'x 882 (4th Cir. 2009). Likewise, in the criminal context, courts have explained that it is a violation of the ESA to import listed species without an import permit issued by the U.S. Fish and Wildlife Service under 16 U.S.C. § 1538(a)(1)(A). *See, e.g., United States v. Adeyemo*, 624 F. Supp. 2d 1081, 1084 (N.D. Cal. 2008).

III. Civil or administrative enforcement options in other wildlife statutes

While the ESA has been a major source of litigation over wildlife, other statutes governing wildlife are also possible sources of civil enforcement actions. Many of these statutes provide for civil or administrative forfeiture, as set forth in the chart and discussion below. Under any of these statutes, a prosecutor may determine that the available evidence would not meet the Government's burden to prove the offense beyond a reasonable doubt, but would likely satisfy the lower preponderance of the evidence standard that applies in civil cases. *Marbled Murrelet (Brachyramphus Marmoratus) v. Pac. Lumber Co.*, 880 F. Supp. 1343, 1360 (N.D. Cal. 1995) (setting forth standard of proof in civil ESA cases). Rather than declining the matter without taking further action, the prosecutor should contact the practitioners identified below and discuss whether the case should be referred for a civil or administrative enforcement action under the provisions laid out in this table.

STATUTE	ADMINISTRATIVE ENFORCEMENT OPTIONS	CIVIL JUDICIAL ENFORCEMENT OPTIONS
African Elephant Conservation Act, 16 U.S.C. §§ 4201–4245	<ul style="list-style-type: none"> • Administrative penalty of \$5,000 per violation under a strict liability standard. § 4224(b). • The ESA may also apply; see below. 	<ul style="list-style-type: none"> • None express in the statute • The ESA may also apply pursuant to § 4224(e).
Airborne Hunting Act, 16 U.S.C. § 742j-1(a)–(f)	<ul style="list-style-type: none"> • Administrative forfeiture of wildlife and of “guns, aircraft, and other equipment” used in the violation. § 742j-1(e). 	<ul style="list-style-type: none"> • Civil judicial forfeiture of wildlife and of “guns, aircraft, and other equipment” used in the violation. § 742j-1(e).
Antarctic Conservation Act, 16 U.S.C. §§ 2401–2413	<ul style="list-style-type: none"> • Administrative penalty of \$10,000 per knowing violation; \$5,000 per 	<ul style="list-style-type: none"> • Civil judicial forfeiture of wildlife and plants, and of vessels and other equipment

	<p>violation under a strict liability standard. § 2407(a). Continuing violations punishable as a separate offense per day.</p> <ul style="list-style-type: none"> • Administrative forfeiture of wildlife and plants, and of vessels and other equipment used in the violation. § 2409(d). 	<p>used in the violation. § 2409(d).</p>
<p>Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668–668d</p>	<ul style="list-style-type: none"> • Administrative penalty of \$5,000 per violation under a strict liability standard. § 668(b). • Administrative forfeiture of birds, eggs, and parts thereof, and of guns, vehicles, and other equipment used in the violation. § 668b(c). 	<ul style="list-style-type: none"> • Civil judicial forfeiture of birds, eggs, and parts thereof, and of guns, vehicles, and other equipment used in the violation. § 668b(b).
<p>Endangered Species Act, 16 U.S.C. §§ 1531–1544</p>	<ul style="list-style-type: none"> • Administrative penalties of \$25,000 or \$12,000 depending on whether violations were knowing, whether the person was doing business as an importer/exporter, and what regulations are involved; and \$500 per violation on a strict liability basis. § 1540(a)(1). • Administrative forfeiture of wildlife and plants. § 1540(e)(4)(A), (e)(5). 	<ul style="list-style-type: none"> • The Department of Justice “may seek to enjoin any person who is alleged to be in violation” of any statutory or regulatory provision. § 1540(e)(6). • Civil judicial forfeiture of wildlife and plants. § 1540(e)(4)(A).
<p>Lacey Act, 16 U.S.C. §§ 3371–3378</p>	<ul style="list-style-type: none"> • Administrative penalty of up to \$10,000 for “trafficking”-type offenses under § 3372(a) if the person in the exercise of due care should have known the wildlife or plants were taken, etc., in violation of law, and for knowing violations of Lacey Act false statement and plant declaration provisions; strict liability penalty of \$250 for violations of Lacey Act plant 	<ul style="list-style-type: none"> • Civil judicial forfeiture of wildlife and plants for most violations notwithstanding any culpability requirements for penalty assessments or prosecutions. § 3374(a)(1).

	<p>declaration and failure-to-label provisions. § 3373(a).</p> <ul style="list-style-type: none"> • Administrative forfeiture of wildlife and plants for most violations notwithstanding any culpability requirements for penalty assessments or prosecutions. § 3374(a)(1), (b). 	
<p>Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801–1891d</p>	<ul style="list-style-type: none"> • Administrative penalty of \$100,000 per violation of § 1857 under a strict liability standard. § 1858(a). Continuing violations punishable as a separate offense per day. • Administrative forfeiture of fish and vessels. § 1860. 	<ul style="list-style-type: none"> • Civil judicial forfeiture of fish and vessels. 16 U.S.C. § 1860.
<p>Marine Mammal Protection Act, 16 U.S.C. §§ 1361–1407</p>	<ul style="list-style-type: none"> • Administrative penalty of \$10,000 per violation under a strict liability standard. § 1375(a). • No administrative forfeiture other than cargo. § 1376(a). 	<ul style="list-style-type: none"> • Civil judicial penalty of \$25,000 available against vessels involved in violation, under a strict liability standard. § 1376(b). • Civil judicial forfeiture of the cargo (or monetary value involved) of vessels involved in violation. § 1376(a). • Civil judicial forfeiture of marine mammals, products, or other cargo involved in violation is available only following assessment of administrative penalty. § 1377(e)(3).
<p>Migratory Bird Treaty Act, 16 U.S.C. §§ 703–712</p>	<ul style="list-style-type: none"> • No administrative forfeiture unless used as the predicate offense under the Lacey Act. 	<ul style="list-style-type: none"> • Civil judicial forfeiture of birds, parts, nests, or eggs. § 706.
<p>Rhinoceros and Tiger Conservation Act, 16 U.S.C. §§ 5301–5306</p>	<ul style="list-style-type: none"> • Administrative penalty of \$12,000 per violation committed by person doing business as an exporter, importer, or distributor on a strict liability basis. 	<ul style="list-style-type: none"> • Civil judicial forfeiture available. § 5305a(c).

	§ 5305a(b)(2)(A).	
Wild Bird Conservation Act of 1992, 16 U.S.C. §§ 4901–4916	<ul style="list-style-type: none"> • Administrative penalty of \$25,000 per statutory violation, or \$12,000 per regulatory violation, committed by any person doing business as an importer or exporter of exotic birds, under a strict liability standard. § 4912(a)(1)(A), (B). • Administrative penalty of \$25,000 for knowing violations of the statute, and \$12,000 for knowing violations of its regulations. <i>Id.</i> • Administrative penalty of \$500 available on a strict liability basis for all statutory, regulatory, and permit violations. § 4912(a)(1)(C). 	<ul style="list-style-type: none"> • None express in the statute

Other statutes may be applicable to civil or administrative actions that involve wildlife. For example, the Animal Welfare Act, which primarily governs domesticated animals and, therefore, is not discussed here, may be relevant to your case. If a person has a protected wild animal without the proper ESA permits, and he or she is also housing it in conditions contrary to the Animal Welfare Act, additional violations could be pursued under that statute. *See, e.g.*, Animal Welfare Act, 7 U.S.C. § 2131 (2015) (providing a licensing system governing the humane treatment of animals for research, commercial sale, or for public display).

IV. Administrative or civil forfeiture

As shown in the table above, many wildlife statutes include civil and administrative forfeiture provisions for the animals or plants involved in, or used as instrumentalities of, the violation. These forfeiture provisions may be useful when criminal intent is difficult to establish. In the import/export context, a prosecutor may encounter an alleged “innocent owner”—someone whose activity technically violates the law, but allegedly as the result of the conduct or omissions of a third party. These violations may be better suited for civil forfeiture actions rather than criminal prosecution. For example, a trophy hunter who attempts to import hides and skulls with missing or improper permits may claim that the airline lost the paperwork, or that the export country or import broker acted improperly with respect to the permits. The trophy hunter must obtain proper permits, *see* 50 C.F.R. §§ 13.1(a), 13.50 (2015), but there may be insufficient evidence to demonstrate that the trophy hunter knowingly violated the ESA, as required to pursue ESA criminal charges. *See* 16 U.S.C. § 1540(b) (2015). In such a case, the Government may instead use administrative or civil forfeiture, where it is not necessary to show the knowledge and intent of the violator. *See* S. REP. NO. 97-123, at 13 (1981), *reprinted in* 1981 U.S.C.C.A.N. 1748, 1760;

see, e.g., Conservation Force v. Salazar, 677 F. Supp. 2d 1203, 1209 (N.D. Cal. 2009) (expired export permit; export permit with missing signature; export permit missing altogether).

The ESA provides for forfeiture of animals or animal parts imported without complying with the applicable CITES or ESA restrictions. The Wildlife and Marine Resource Section is prepared to bring these types of actions. Recent amendments to the Lacey Act involving plants, including trees, provide the basis for civil forfeiture actions to address concerns with illegal logging and other issues related to improper timber practices. Forfeiture related to illegally harvested or traded wood is a growing practice area for the Fish and Wildlife Service, the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture, and the U.S. Customs and Border Protection. For more information on the 2008 Lacey Act amendments, *see* Elinor Colbourn & Thomas W. Swegle, *The Lacey Act Amendments of 2008: Curbing International Trafficking in Illegal Timber*, 59 U.S. ATTORNEYS' BULL. 91, 92–93, 104 (July 2011). Their article presents a checklist of questions for any Assistant U.S. Attorney contemplating a Lacey Act timber prosecution. A deeper treatment of civil and administrative forfeiture in the wildlife context more broadly appears in the July 2012 *Bulletin*. *See* Katharine Goepf & Elinor Colbourn, *Forfeiture Primer for Plant and Wildlife Cases*, 60 U.S. ATTORNEYS' BULL. 17, 23–24 (July 2012).

The Lacey Act, codified at 16 U.S.C. §§ 3371–3378, is the nation's oldest wildlife statute and is used in the fight against international trafficking in protected wildlife. Before 2008 the Lacey Act only applied to plants if they were domestic and protected under CITES, the ESA, or a state's protected species list. The Food, Conservation, and Energy Act of 2008 (effective May 22, 2008, § 8204 "Prevention of Illegal Logging Practices") amended the Lacey Act to expand coverage to all plants, except for three categories: (1) "common cultivars" and "common food crops," (2) scientific specimens, and (3) plants that remain planted or are to be planted (for example, live plants as in the nursery trade). *See* 16 U.S.C. § 3371 (2015). Those excepted categories do not include plants listed in an appendix to CITES or species protected under the ESA. *See id.* § 3371(f)(2); 7 C.F.R. § 357.2 (2015).

Relevant to this discussion, the Lacey Act imposes civil and criminal sanctions for the import, export, transport, sale, receipt, or acquisition of wildlife or plants that have been taken, possessed, transported, or sold in violation of a state, tribal, federal (such as the ESA), or foreign law. 16 U.S.C. §§ 3372, 3373 (2015). The foreign laws that provide the predicate violation must be plant-related. *See id.* § 3372(a)(2)(B). The Lacey Act also makes it a crime to submit or make any false record of a plant, or product thereof, imported into the United States. *Id.* § 3372(d). Finally, beginning on December 15, 2008, imports of certain plants or plant products must be accompanied by a declaration that includes specific information about the plant, its value, and its origin. *Id.* § 3372(f).

Violations of the Act are addressed through: (1) forfeiture of the goods, (2) imposition of civil administrative monetary penalties, and (3) imposition of criminal penalties. *Id.* §§ 3373, 3374. Civil forfeiture proceeds notwithstanding any culpability requirements for civil penalty assessment or criminal prosecution as set forth in § 3373; that is, there is strict liability for forfeiture of plants trafficked in violation of the Lacey Act. The Government must show by a preponderance of the evidence that the plant or plant product was taken, possessed, transported, or sold in violation of an applicable underlying law and was then trafficked in violation of the Lacey Act; was the subject of a false record, account, or label; or lacked a required declaration. The Civil Asset Forfeiture Reform Act and agency regulations set forth the procedures for civil judicial and administrative forfeitures under the Lacey Act. 18 U.S.C. § 983(i)(2) (2015); *see* 16 U.S.C. § 3374 (2015); 50 C.F.R. §§ 12.1–12.6 (2015).

A recent case in the Eastern District of Virginia addresses common issues that arise in forfeiture cases, including under the predicate offense required for Lacey Act violations (in this case, the ESA's implementation of CITES). The case, *United States v. 1866.75 Board Feet and 11 Doors and Casings, More or Less, of Dipteryx Panamensis Imported From Nicaragua*, 587 F. Supp. 2d 740, 744, 746 (E.D. Va. 2008), *aff'd sub nom., United States v. Thompson*, 332 F. App'x 882 (4th Cir. 2009), involved the attempted importation without a Certificate of Origin, as required under CITES, of endangered wood that

was listed on a CITES Appendix. The Government brought an ESA forfeiture action. The claimants raised several defenses that were addressed in detail. The court’s treatment of these may be useful in future forfeiture cases:

1. The claimants argued that the wood could be imported without a Certificate of Origin as a “household effect.” The court rejected this argument because the definition of “household effect” in 50 C.F.R. § 23.15 does not encompass construction materials like the claimed wood, which was voluminous enough to cover all the floors in a house. *Id.* at 749.
2. The claimants argued they were “innocent owners.” The court rejected this argument because it is illegal under the ESA to possess wood listed on a CITES Appendix and exported without the proper Certificate. *Id.* at 751.
3. The claimants argued that the action was time barred because the 60-day statute of limitations for administrative forfeiture applies to judicial forfeitures. The court rejected this argument because it was undisputed that the case proceeded as a judicial forfeiture from its inception, and the statute specifies that the 60-day deadlines apply only to non-judicial civil forfeiture. *Id.* at 751–52.
4. The claimants argued that they were deprived of due process based on unconstitutional vagueness because the statute failed to provide fair notice of their prohibited conduct. The court rejected this argument because the statute provides notice that it is impermissible to ship a large quantity of wood and attempt to claim it as a “household effect.” *Id.* at 752–53.
5. The claimants argued that forfeiture of the wood is an excessive penalty under the Eighth Amendment. The court rejected this argument because the claimants had not met their burden to prove that the forfeiture was a disproportionate punishment with respect to the Civil Asset Forfeiture Reform Act factors on proportionality under 18 U.S.C. § 983(g). *Id.* at 753.

While this case provides a roadmap for briefing common questions in timber forfeiture cases, significant resources are available through the Environmental Crimes Section (ECS) to assist Assistant U.S. Attorneys in future Lacey Act timber cases. These resources range from model pleadings and basic advice and guidance to contacts for particular issues, such as the latest information on scientific capacities for species identification, proof of particular underlying foreign laws, and obtaining trade and customs data. Initial inquiries may be directed to Elinor Colbourn, Assistant Chief, ECS, at 202-305-0205.

V. Administrative remedies

A. Administrative penalties

As outlined in the table above, many wildlife statutes include administrative penalty provisions in the form of civil fines that may be assessed by the Secretary (of the Departments of the Interior, of Commerce, or of Agriculture, as appropriate) for “knowing” and strict liability violations. These administrative penalties may be assessed by the Secretary in an action parallel to the forfeiture of wildlife or its voluntary abandonment. Administrative penalties are also often assessed when the decision is made to pursue violations in a civil rather than a criminal manner. Administrative penalties may be assessed, for example, in cases of recurring minor violations to deter repeat violations or for prohibited, but not criminal, actions that result in mass casualties. Several examples of administrative penalty actions pursued by the U.S. Fish and Wildlife Services (FWS) are provided below:

- A town in North Carolina entered into a civil settlement agreement in connection with the take of at least 58 endangered Appalachian elktoe mussels, caused by the accidental overflow of sewage from the town’s sewage treatment plant. Under the agreement, the town paid \$15,000 to the state

for use in conserving elktoe mussels. *See* Order on Rehearing and Clarification, 2008 WL 1808190, at *2, *7 (Dep't of Energy Apr. 22, 2008).

- A Miami customs broker pleaded guilty to a felony violation of the Lacey Act in connection with the illegal importation of 12 shipments of cosmetics made from Siberian sturgeon caviar. The shipments arrived in the United States without the required CITES permits and were not declared as wildlife. Another company involved in these transactions, with a lesser degree of culpability, agreed to pay a \$97,836 administrative penalty. *See United States v. Moghaddam*, No. 08-20365-CR, 2008 WL 4540415, at *3 (S.D. Fla. Oct. 9, 2008).
- In Champlain, New York, FWS officers stopped a shipment of 1,600 brown seal skins from Turkey, which were unlawfully transiting the United States on their way to Montreal. The Canadian importer paid a \$10,000 administrative penalty, but the goods were not forfeited. DOI administrative process, no case citation.
- Two men responsible for destroying protected salamander habitat in the Monongahela National Forest admitted to violations of the ESA and Forest Service regulations. As part of the administrative penalty settlement agreement, the defendants paid \$1,500 in fines and bought and planted at least 2,000 native red spruce seedlings in a restoration area next to existing salamander habitat. DOI administrative process, no case citation.

B. License/permit revocation or restriction

Many of the wildlife statutes allow otherwise prohibited activities, such as import, export, take, or sale in interstate commerce, through the issuance of a permit or license. Frequently, individuals or wildlife businesses continue conducting activities that require a permit or wildlife import/export license, despite being found criminally or civilly liable for egregious wildlife violations. Revocation or restriction of wildlife import/export licenses or protected species permits can be a powerful tool in the fight to gain compliance with wildlife statutes. For instance, in criminal cases that involve import or export of wildlife, the Government should determine whether the importer or exporter, or others involved in the offense, possess a wildlife import/export license or any protected species permits. It may be appropriate, particularly in egregious cases, to include revocation or restriction of such authorizations as part of any outcome of the case.

FWS regulations state that a permit (including the wildlife import/export license) may be revoked if the permittee willfully violates any federal or state statute or regulation, any Indian tribal law or regulation, or any law or regulation of any foreign country, which involves a violation of the conditions of the permit or of the laws or regulations governing the permitted activity. 50 C.F.R. § 13.28(a) (2015). In addition, a conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act disqualifies a person from receiving or exercising the privileges of a permit, unless expressly waived by FWS. *Id.* § 13.21(c)(1). For example:

- The head of a private wildlife research facility pleaded guilty to the take of a golden eagle for the purpose of conducting various bird banding activities, without the required federal or state permits. *United States v. Bittner*, No. 3:13-cr-1391 (S.D. Cal. filed Apr. 18, 2013). The researcher had a long history of conducting legal bird banding activities and surveys, but decided the permitting process was too onerous. During the investigation, it was found that the researcher had banded over 150 birds without a federal permit to do so; had been banding birds in one state for over 10 years without the required state permits, which invalidated any federal permits; and had conducted banding and satellite tagging under paid contracts. Complaints also revealed inappropriate handling and tagging of birds resulting in death. After the conclusion of the case,

FWS initiated a request to the U.S. Geological Survey, the agency responsible for issuing federal bird banding permits, to revoke the banding permit.

- A FWS-licensed master falconer pleaded guilty to trapping juvenile Harris hawks without the required falconry capture permit, and transporting them from one state to another. *United States v. Browning*, No. 1:10-po-2 (W.D.N.C. filed Apr. 14, 2010). The falconer applied for permits after the fact in an attempt to legitimize the unlawfully captured birds, as well as in an attempt to falsely obtain replacement leg bands for a supposed escaped hawk. As part of sentencing, the magistrate judge revoked the falconer's federal falconry permit and state hunting and fishing licenses for one year.

Other FWS regulations address the repeated failure to comply with laws and regulations. Under the general wildlife permitting regulations, FWS may deny issuance based upon a lack of showing of responsibility. 50 C.F.R. § 13.21(b)(3) (2015). Similarly, repeated failure to either provide prior notification for live and perishable shipments or repeated failure to import or export in compliance with the law can lead to denial, suspension, revocation, or restriction of permits and licenses. *Id.* § 14.93(d); *see also* 15 C.F.R. § 904.301 (2015) (similar, Department of Commerce). For instance:

- A company whose sole business was importing and exporting raw and tanned skins of CITES protected crocodiles, caiman, and alligators repeatedly imported skins in violation of CITES and ESA requirements. Violations involved skins with CITES control tags that did not lock and secure the item, skins that were imported without a CITES permit, more skins than were authorized on a permit, and identification problems (declaring and permitting a different species than was present in the shipment). FWS took various administrative actions over several years, including voluntary abandonment of the skins, civil forfeiture of the goods, and assessment of administrative penalties. FWS ultimately denied renewal of the license due to the repeated violations and the showing of a lack of responsibility. DOI administrative process, no case citation.

Revocation of a wildlife import/export license can be a harsh punishment when businesses fail to follow the laws in certain instances, but otherwise comply with wildlife import/export regulations. This is particularly true for small businesses whose sole focus is on importing wildlife. FWS has the ability to restrict an import/export license when granting full authority for any commercial wildlife importing or exporting is not appropriate. 50 C.F.R. § 14.93(d) (2015). This ability to restrict what can be imported or exported, in lieu of revoking full import/export privileges, has become a useful tool for FWS where businesses repeatedly violate CITES requirements while complying with all other wildlife laws and regulations. Restrictions can be applied for the life of the license (a 2-year maximum) with the expectation that renewals would also be for a restricted license or on a time-limited basis, such as 6 months or one year, depending upon the severity of the violations. By way of example:

- A Missouri area fur dealer reached an administrative settlement agreement pertaining to a federal investigation where it was shown that the dealer and his company had illegally exported multiple shipments of fur from the United States. These exports were done without properly marking and declaring the wildlife and having it inspected. As a result of the settlement, the dealer was required to pay a \$30,000 administrative penalty, surrender the company's import/export license, and apply for a license that authorized import only.
- A live tropical fish importer had a history of import violations involving live coral protected under CITES. The company had no violations involving other types of live wildlife. Over a period of several years, FWS took administrative actions ranging from simply allowing the importer to abandon its property rights to illegally imported coral, to the addition of administrative penalties as part of civil forfeitures, and finally criminal forfeiture of collateral. The repeated history of violations with coral, combined with a clear showing of a lack of responsibility, led FWS to restrict the import/export license of the business and disallow the

importer the ability to import and export CITES-listed coral, while allowing the company to continue importing and exporting live tropical fish.

VI. Conclusion

Given the array of available enforcement options under most federal wildlife statutes, there may be avenues to pursue even if the matter does not proceed criminally. To give full effect to the purpose of these statutes, as evidenced by Congress's inclusion of non-criminal remedies alongside criminal penalties, it is important that prosecutors steer matters declined for criminal purposes to the relevant practitioners for consideration as possible civil matters. For questions regarding potential civil judicial forfeiture actions or civil injunctive matters, contact an Assistant Section Chief of the Wildlife and Marine Resources Section at 202-305-0210.

For administrative enforcement matters, your case agent may know the relevant agency counsel in his or her region who handles such cases. If not, questions regarding administrative penalties or administrative forfeiture under wildlife statutes administered by the U.S. Department of the Interior can be referred to the staff attorney at the Office of the Solicitor, Division of Parks and Wildlife, at 202-208-4338. For administrative penalties or administrative forfeiture under wildlife statutes administered by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, contact the Chief of the Enforcement Section at 301-427-8281. ❖

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Restitution in Wildlife Cases

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An important, yet often overlooked, facet of any wildlife case is the effort to restore the victims of the offense through an order of restitution. In wildlife cases, as in any other case, prosecutors are directed to “give careful consideration to seeking full restitution to all victims of all charges contained in the indictment or information.” DEP’T OF JUSTICE, UNITED STATES ATTORNEYS’ MANUAL § 9-16.320 (2000). While the victim of a Lacey Act or Endangered Species Act prosecution might not be as obvious as the victims of a telemarketing fraud scheme or assault, the law does provide for restitution to any victim, including the owner of the destroyed or damaged natural resource.

The impact of a restitution order can be enormous, oftentimes far greater than the fine and forfeiture combined. For example, in *United States v. Bengis*, No. S1-03-Crim.-0308(LAK), slip op. at 7 (S.D.N.Y. June 14, 2013), the court awarded restitution in the amount of \$22 million to the government of South Africa, while the combined fine and forfeiture in that case was approximately \$14.5 million. Moreover, restitution can be used to address the very real harms involved in wildlife offenses, such as the depletion of a species or the damage to natural resources, which cannot be remedied by imprisonment, fines, or forfeiture. As the Supreme Court noted, the remedy of restitution is unique because “it forces the defendant to confront, in concrete terms, the harm his actions have caused.” *Kelly v. Robinson*, 479 U.S. 36, 49 n.10 (1986).

I. Statutory basis for an order of restitution

In wildlife related crimes, there are three statutory mechanisms through which restitution may be awarded by a court. The general restitution statute, 18 U.S.C. § 3556, provides the court with the authority to issue an order of restitution in accordance with 18 U.S.C. §§ 3663A and 3663. Section 3663A, also known as the Mandatory Victim Restitution Act of 1996 (MVRA), and § 3663, also known as the Victim Witness Protection Act of 1984 (VWPA), guide the court in determining when and how much restitution to order if there has been a conviction of a Title 18 offense. These two statutes provide the legal framework for most orders of restitution for conviction of Title 18 offenses. Other sections of Title 18 allow a court to order restitution as a condition of probation (§ 3563) or supervised release (§ 3583) in any case, and are not limited to convictions under Title 18. Following conviction in a wildlife criminal case, the counts of conviction, the nature of the harm, and the features of the local laws applicable to the victim all play a role in determining restitution.

II. Restitution: When and how is it available?

A. The MVRA and VWPA

The MVRA and the VWPA generally limit restitution to victims of offenses under Title 18. For example, courts have ordered restitution for victims of the offenses of conspiracy (*United States v. Meredith*, 685 F.3d 814 (9th Cir. 2012)); false statements (*United States v. Peterson*, 538 F.3d 1064 (9th Cir. 2008)); *United States v. Hoover*, 175 F.3d 564 (7th Cir. 1999)); and smuggling (*United States v.*

Lawson, 377 F. App'x 712 (9th Cir. 2010)). However, some courts have rejected attempts to impose restitution under the MVRA or VWPA where the only Title 18 charge was aiding and abetting, in violation of 18 U.S.C. § 2, noting that § 2 does not establish an “offense” of which a defendant may be convicted. *United States v. Elias*, 269 F.3d 1003, 1021 (9th Cir. 2001) (later amended to permit restitution as a term of supervised release); *United States v. Snider*, 957 F.2d 703, 706 (9th Cir. 1991). But other courts have ordered restitution based only on § 2. *United States v. West Indies Transport Inc.*, 127 F.3d 299, 315 (3d Cir. 1997) (restitution for Clean Water Act offense appropriate because defendant was also charged with aiding and abetting); *United States v. Ross*, No. 11-30101, 2012 WL 4848876, at *5 (D.S.D. Oct. 10, 2012).

The MVRA: Under the MVRA, an order of restitution is mandatory for an offense that is a crime of violence or an offense against property under Title 18 (including an offense committed by fraud and deceit) for which an identifiable victim has suffered a physical injury or pecuniary loss. 18 U.S.C. § 3663A(c)(1) (2015). In cases involving loss or damage to property, the court shall require the return of the property. If the return of the property is impossible, impracticable, or inadequate, the defendant shall be ordered to pay the greater of the value of the property on the date of the loss or at the time of sentencing, less the value of any property returned. In addition, the court shall order restitution for costs expended by the victim “during participation in the investigation or prosecution of the offense or attendance at proceedings related to the offense.” *Id.* § 3663A(b)(4). This section has been held to support restitution for fees paid to investigators and attorneys assisting the victim that were a direct and foreseeable result of the defendant’s conduct. *United States v. Gordon*, 393 F.3d 1044, 1057 (9th Cir. 2004). Restitution under the MVRA must be ordered in full without regard to the defendant’s ability to pay. *United States v. Barton*, 366 F.3d 1160, 1163, 1165–1166 (10th Cir. 2004); *United States v. Cheal*, 389 F.3d 35, 44, 46 (1st Cir. 2004); *United States v. De La Fuente*, 353 F.3d 766, 769 (9th Cir. 2003); *United States v. Powell*, 354 F.3d 362, 369 (5th Cir. 2003); *United States v. Randle*, 324 F.3d 550, 555 n.2 (7th Cir. 2003); *United States v. Futrell*, 209 F.3d 1286, 1292 (11th Cir. 2000); *United States v. Edwards*, 162 F.3d 87, 89 (3d Cir. 1998).

The VWPA: Discretionary restitution under the VWPA is available for those Title 18 offenses “other than an offense described in Section 3663A [the MVRA].” Thus, if an offense is covered by the MVRA, the provisions of the MVRA control. 18 U.S.C. § 3663(a)(1)(A) (2015). When ordering restitution under the VWPA, a court must consider not only the losses of the victim, but also—unlike under mandatory restitution—the defendant’s ability to pay. *Id.* § 3663(a)(1)(B)(i). The manner in which the court is to calculate the amount of loss in cases of loss or damage to property is virtually identical to the provisions in the MVRA; however, the harm for which a victim can be compensated under the VWPA is not limited to property harm. The VWPA also provides compensation for expenses related to participation in the investigation and prosecution of the offense.

B. Condition of probation or supervised release

A court is also empowered to order restitution as a condition of probation or supervised release. One of the “mandatory conditions” of probation, set forth in 18 U.S.C. § 3563(a)(6), is the power to order restitution in accordance with the MVRA. When the court imposes restitution as a “discretionary condition” of probation pursuant to § 3563(b)(2), such order is “not subject to the limitation[s] of [the MVRA or the VWPA].” This language has been interpreted to mean that restitution can be ordered for a broader range of offenses than those mentioned in the MVRA or the VWPA, when imposed as a discretionary condition of probation. *United States v. Batson*, 608 F.3d 630, 634 (9th Cir. 2010); *United States v. Dahlstrom*, 180 F.3d 677, 686 (5th Cir. 1999); *United States v. Bok*, 156 F.3d 157, 166–167 (2d Cir. 1998).

The authority of the court to order restitution as a condition of probation is discussed at length in *United States v. Ross*, No. 11-30101, 2012 WL 4848876, at *2–3 (D.S.D. Oct. 10, 2012). In finding that

the court had the authority to order restitution as a condition of probation for any criminal offense, “including those in Title[] 16,” the court noted that the Supreme Court had approved an order of restitution as a condition of probation based on an offense set forth in the Code of Federal Regulations. *Id.* (citing *United States v. Nachtigal*, 507 U.S. 1, 2, 5 (1993)). The *Ross* court stated that an order of restitution as a condition of probation must be limited to the offense of conviction. The court reasoned that such limitation was required because the Probation Statute requires restitution to be ordered under § 3556, which requires restitution in accordance with the MVRA or the VWPA, which in turn limits restitution to the offense of conviction, “and not for other related offenses which the defendant was not convicted of.” *Id.* at *3. *See also United States v. Khanh Vu*, No. V-11-31, 2011 WL 2173690, at *3 (S.D. Tex. June 1, 2011) (restitution may be ordered as a condition of probation even where the general restitution statutes do not mention the offense of conviction).

A court is also authorized to impose restitution as a condition of supervised release under 18 U.S.C. § 3583(d), which permits a court to impose “any condition set forth as a discretionary condition of probation in section 3563(b),” which includes a condition requiring restitution. 18 U.S.C. § 3583(d) (2015). Because the section relating to supervised release incorporates by reference the section on probation, restitution orders as a condition of supervised release are similarly unfettered by the limitations on the covered offenses set forth in the MVRA and VWPA. *Batson*, 608 F.3d at 635. Orders of restitution as a condition of supervised release, like those issued as a condition of probation, must be limited to the offense of conviction, unless it is otherwise agreed in a plea agreement. *Id.* at 634 n.4, 637.

C. Pursuant to a plea agreement

Where restitution is mandated under the MVRA, it must be addressed in a plea agreement. The MVRA allows the court to “order, if agreed to by the parties in a plea agreement, restitution to persons other than the victim of the offense.” 18 U.S.C. § 3663A(a)(3) (2015). The language in the plea agreement relating to restitution has been narrowly construed by the courts. A defendant’s acknowledgement of responsibility for restitution beyond the scope of the offense of conviction must be explicit in order to withstand judicial scrutiny. For example, a statement in a plea agreement that “the defendant understands that the court may order restitution . . . to the following individuals in the amounts listed” was held to be notice to the defendant rather than an agreement to pay those amounts. *United States v. Ramilo*, 986 F.2d 333, 334 (9th Cir. 1993), *rev’d on other grounds*, *United States v. Bond*, 309 F. App’x 205 (9th Cir. 2009).

Restitution may be ordered pursuant to a plea agreement for an offense, such as a wildlife offense under Title 16, which is not explicitly covered by the MVRA. In such cases, the plea agreement must set forth an appropriate factual basis and make reference to a Title 18 offense covered by the MVRA. This is required by an MVRA provision stating that if the plea agreement does not arise from conviction of an offense covered by the MVRA, the plea agreement must specifically state that an offense to which the MVRA is applicable gave rise to the plea agreement. 18 U.S.C. § 3663A(c)(2) (2015). So, for example, where a defendant prefers to plead to a Lacey Act import violation rather than the alternative Title 18 smuggling violation, the plea agreement would have to specify that the smuggling offense gave rise to the plea agreement. Alternatively, the parties to the plea agreement could agree that restitution was appropriate as a term and condition of probation or supervised release directly as a result of the Title 16 offense. How the plea is structured would likely turn on whether there was agreement on the victims, the appropriateness of restitution, the basis for restitution, and the total amount of restitution.

Similar language in the VWPA states a court “may also order restitution in any criminal case to the extent agreed to by the parties in a plea agreement.” *Id.* § 3663(a)(3). Courts have held that this provision allows a court to order restitution in an amount greater than the loss attributable to the counts of conviction. *See United States v. Blake*, 81 F.3d 498, 507 (4th Cir. 1996); *United States v. Soderling*, 970 F.2d 529, 534 n.9 (9th Cir. 1992); *United States v. Rice*, 954 F.2d 40, 44 (2d Cir. 1992). Courts have also held that the provision allows a court to order restitution to victims not harmed by the count of conviction.

See United States v. Doering, 759 F.3d 862, 866 (8th Cir. 2014); *United States v. Moore*, 703 F.3d 562, 573–574 (D.C. Cir. 2012). Pursuant to a plea agreement, the court may order a defendant pleading guilty to a Title 16 wildlife offense to make restitution to victims of other criminal offense(s) for which he or she was neither charged nor convicted, but which were part of the course of criminal conduct.

III. Fines and forfeiture

By law, restitution in felony cases is to be ordered in addition to (rather than in lieu of) “any other penalty authorized by law,” including fines and forfeiture. 18 U.S.C. §§ 3663(a)(1)(A), 3663A(a)(1) (2015). For a misdemeanor, restitution may be ordered in addition to, or in lieu of, any other penalty authorized by law. *Id.*

A. Fines

Although a fine is mandatory in all cases unless the defendant can demonstrate an inability to pay, *see* U.S. SENTENCING GUIDELINES MANUAL § 5E1.2 (2014), a court is legally required to consider whether imposition of a fine would impair the ability of a defendant to make restitution. 18 U.S.C. § 3572(b) (2015). A court, in considering the available resources of a defendant, must give primacy to restitution, and thereafter determine if sufficient assets remain to pay a fine as well. Neither a fine nor an order of restitution may be discharged in bankruptcy. *Id.* § 3613(e), (f).

B. Forfeiture

Courts have found no conflict where a sentence involved both an order of restitution and an order of forfeiture, noting the distinct purposes served by restitution and forfeiture in supporting such sentences. While forfeiture acts to disgorge unfair proceeds and is considered punitive, restitution is intended to make the victim of the crime whole, and is considered remedial. *United States v. Emerson*, 128 F.3d 557, 567 (7th Cir. 1997). The plain language of 18 U.S.C. § 3664(f)(1)(B) has been held to deny the court the discretion to reduce the amount of restitution by the amount ordered to be forfeited. *See United States v. Taylor*, 582 F.3d 558, 568 (5th Cir. 2009); *United States v. Alalade*, 204 F.3d 536, 540 (4th Cir. 2000); *United States v. Leon-Delfis*, 203 F.3d 103, 116 (1st Cir. 2000). An order of forfeiture may not be discharged in bankruptcy, so long as it is for the benefit of a governmental unit and is not compensation for actual pecuniary loss imposed with respect to an event that occurred more than 3 years before the date of the filing of the bankruptcy petition. 11 U.S.C. § 523(a)(7) (2015).

Forfeiture is often imposed in wildlife cases. Many of the statutes provide for forfeiture of not only the wildlife itself, but also for guns, traps, nets, equipment, vessels, vehicles, aircraft, and other means of transportation used in the illegal take of the wildlife. *See* 16 U.S.C. §§ 668b(b), 707(d), 1540(e)(4)(B), 3374 (2015). Because restitution and forfeiture serve different purposes, the calculation of one should not affect the other unless the court must consider the ability of the defendant to pay. In *United States v. Bengis*, 631 F.3d 33, 41 (2d Cir. 2011), the court held that “there is no problem in imposing both a restitution award and a forfeiture award,” agreeing with other courts that held simultaneous imposition of both a forfeiture remedy and a restitution remedy, authorized by separate statutes, offends no constitutional provision. Furthermore, the imposition of restitution, together with a fine and/or forfeiture, is not generally considered an impermissible double punishment because restitution serves the separate purpose of restoring the victim, rather than punishing the offender, deterring others, or capturing unjust enrichment. *See United States v. Taylor*, 582 F.3d 558, 565–67 (5th Cir. 2009) (restitution is permissible in addition to forfeiture, discussing the law of other circuits); *United States v. Hoffman-Vaile*, 568 F.3d 1335, 1344 (11th Cir. 2009) (rejecting defendant’s argument that forfeiture to Government should be offset by the amount paid in restitution to victims, because “[a]lthough this might appear to be a double dip, restitution and forfeiture serve different goals”); *United States v. Spiropoulos*, 976 F.2d 155, 164 n.9 (3d Cir. 1992) (restitution is a permissible financial penalty in addition to a fine).

IV. Who is a “victim” in wildlife cases?

In determining who is a victim under the MVRA or VWPA, courts have repeatedly held that the Federal Government and its agencies, states, and foreign governments qualify as victims entitled to restitution. Under the MVRA and the VWPA, restitution is only available to the “victim” of the convicted offenses. *See* 18 U.S.C. §§ 3663(a)(1)(A), 3663A(a)(1) (2015). Both the MVRA and the VWPA define a victim as “a person directly and proximately harmed as a result of the commission of an offense.” *Id.* §§ 3663(a)(2), 3663A(a)(2). A victim further includes, in the case of an offense that involves a scheme, conspiracy, or pattern, any person directly harmed by the defendant’s conduct in the course of the scheme or conspiracy. The Crime Victims’ Rights Act, 18 U.S.C. § 3771, provides victims with the right to full and timely restitution, notice of any public court proceedings involving the crime, and the right to be reasonably heard at any public proceeding involving release, plea, or sentencing. Section 3771(c)(1) requires officers of the United States involved in the prosecution of crime to make their best efforts to see that victims are notified of, and accorded, those rights.

A. Evolution of “victim” under the MVRA

The seminal case applying the MVRA to wildlife offenses is the 2011 decision in *Bengis*. In *Bengis*, the defendants pleaded guilty to conspiring to violate the Lacey Act and to smuggling illegally harvested lobsters from South Africa into the United States. The court found South Africa to be a victim with a property right in the illegally harvested lobsters, and thus entitled to restitution under the MVRA. The court reasoned that because South Africa could have seized the illegally harvested lobsters and sold them, it had a property interest in the lobsters that went beyond a mere regulatory interest, making restitution mandatory. The Second Circuit drew an analogy to *Pasquantino v. United States*, 544 U.S. 349 (2005) (wherein the Supreme Court held that Canada had a compensable property interest in liquor tax revenue the defendants avoided through their smuggling scheme), noting that the defendants’ conduct in harvesting at night and underreporting deprived South Africa of the ability to seize and sell the illegally captured lobsters at market price and retain the proceeds.

A few months later, the Sixth Circuit in *United States v. Bruce*, 437 F. App’x 357 (6th Cir. 2011), similarly awarded restitution pursuant to the MVRA to the States of Tennessee and Alabama, where the defendants were convicted of conspiracy to violate the Lacey Act and substantive Lacey Act charges. The court found that the states had a property interest in undersized mussels taken from their waters and were entitled to compensation for their loss.

The *Bengis* and *Bruce* decisions were followed by *United States v. Oceanpro Industries, Ltd.*, 674 F.3d 323, 332 (4th Cir. 2012), in which the court ordered restitution under the MVRA, payable to the States of Maryland and Virginia by defendants convicted of conspiring to violate the Lacey Act by illegally harvesting striped bass. The Fourth Circuit, finding the logic of *Bengis* persuasive, held that the states had a compensable proprietary interest in the striped bass, rather than a non-compensable regulatory interest, because once the fish were illegally harvested, they were forfeited and became the property of the states by action of state law. The *Oceanpro* court cited *United States v. Newsome*, 322 F.3d 328, 340–342 (4th Cir. 2003), in which the United States was deemed a compensable victim under the MVRA and awarded restitution for illegally harvested cherry trees from a national forest.

Thereafter, in *United States v. Butler*, 694 F.3d 1177 (10th Cir. 2012), the Tenth Circuit further developed this line of precedent in awarding restitution to the State of Kansas following the defendants’ convictions for conspiring to sell and transport deer in violation of the Lacey Act. The *Butler* court found that the State of Kansas had a property interest in illegally untagged deer carcasses, relying on the fact that “the several states own animals within their boundaries in a sovereign capacity,” and, thus, “harm against the wildlife in a state is tantamount to committing harm against that state’s property for purposes of the MVRA.” *Id.* 1183–1184. The court further held, as an alternative basis for finding that the state was a victim, that Kansas suffered a cognizable injury and pecuniary loss because the defendants’ failure to

tag the deer prevented Kansas from accurately managing its deer population and could lead to overharvesting. *Id.* at 1184. The Tenth Circuit further reasoned that restitution for a conspiracy to violate the Lacey Act was appropriate because the Lacey Act offenses were “offense[s] against property” and, therefore, covered by the MVRA. *Id.* at 1183.

A magistrate judge in *United States v. Ross*, No. 11-30101, 2012 WL 4848876, at *5 (D.S.D. Oct. 10, 2012), found that restitution was appropriate under the MVRA in a case where the defendant was charged solely with aiding and abetting a violation of the Lacey Act, in violation of 18 U.S.C. § 2. The *Ross* court found that the Government had a proprietary interest in the illegally taken hawks after they were killed, warranting restitution under the MVRA on the defendant’s Title 18 offenses. *Id.* at *2. The reasoning of the Tenth Circuit in *Butler* (Lacey Act offenses being crimes against property) also suggests that an order of restitution could be issued in such a situation. Caution should be exercised in this area because, unlike conspiracy, aiding and abetting is not a separate offense under Title 18. See *United States v. Ali*, 718 F.3d 929, 936 (D.C. Cir. 2013); *United States v. Garcia*, 400 F.3d 816, 817 (9th Cir. 2005); *United States v. Galiffa*, 734 F. 2d 306, 310 (7th Cir. 1984); *United States v. Cowart*, 595 F.2d 1023, 1031 n.10 (5th Cir. 1979). Given that aiding and abetting necessarily involves two parties, a conspiracy charge under Title 18 would likely be available to support restitution under most factual scenarios.

The legal theory underpinning these decisions is the concept that the Government in some way obtained a property interest in the wildlife, and was thus entitled to restitution. In *Bengis*, for example, the court found that the moment a fisherman pulled an illegally harvested lobster out of the sea, a property right to seize that lobster was vested in the government of South Africa. Evading the seizure deprived South Africa of the opportunity to sell those lobsters at market price, resulting in an economic loss to South Africa. *Bengis*, 631 F.3d at 39. Similarly, in *Oceanpro*, the court held that Maryland and Virginia had a property interest in illegally harvested striped bass after they were caught, thereby entitling them to restitution under the MVRA. *Oceanpro*, 674 F.3d at 332.

Although all the reported cases applying the MVRA in wildlife cases rely on the fact that the case involved an offense against property, some, like *Butler*, set out alternative grounds for the restitution award. This area of case law is relatively new and rapidly evolving. For example, in addition to the theories relied upon by courts to date, in the future it might be argued that wildlife cases fit within the subsection relating to crimes of violence. This argument might prove useful because, while the MVRA limits its applicability to offenses against property under Title 18, there is no such limit on its applicability to crimes of violence. Crimes of violence under the MVRA are defined (per 18 U.S.C. § 16) as offenses which have “as an element the use, attempted use, or threatened use of physical force against the person or property of another” or a felony offense that, by its nature, involves a substantial risk that physical force may be used against person or property in the course of committing the offense. 18 U.S.C. § 16 (2015). Offenses involving the killing of wildlife might qualify as crimes of violence under this definition and permit the invocation of the MVRA without requiring a concomitant Title 18 offense.

B. Evolution of “victim” under the VWPA

Both the *Bengis* and *Oceanpro* courts determined that the VWPA would have been a valid alternative basis for an order of restitution in those cases. The courts relied on the broad definition of a victim in the VWPA, which includes anyone “directly and proximately harmed as a result of the commission of an offense” 18 U.S.C. § 3663(a)(2) (2015). In *Bengis*, the court rejected the defendants’ argument that they had not “directly harmed” the interests of South Africa because they did not illegally harvest the lobster themselves. The *Bengis* court found that the defendants’ conduct (in smuggling the lobsters out of South Africa knowing that they had been illegally harvested, and enabling the poaching to go undetected by South Africa by off-loading at night, underreporting the catch, and submitting false documents) had directly and proximately harmed the South African government, making it eligible for restitution under the VWPA. *Bengis*, 631 F.3d at 41. The *Oceanpro* court found that the

states had a legitimate and substantial interest in protecting the fish in their waters, which were directly and proximately harmed by the defendants' illegal harvesting practices. *Oceanpro*, 674 F.3d at 331.

Similarly, the court in *Ross* found that the Government had a legitimate and substantial interest in preserving and protecting hawks in its airspace, derived not from any ownership of the resources, but rather from the duty the Government owed to the people. The duty of the Government to protect the public interest in the natural wildlife resources was directly and proximately harmed by the defendant's conduct and supported an order of restitution. *Ross*, 2012 WL 4848876, at *2.

V. Procedures for issuing a restitution order

The procedures for the issuance of an order of restitution are set forth in 18 U.S.C. § 3664. The presentence report should include a complete accounting of victim losses, any restitution owed pursuant to a plea agreement, and information relating to the economic circumstances of the defendant. Upon the request of probation, the prosecutor must provide a listing of all victims and the amount subject to restitution 60 days prior to sentencing. If the victim's losses are not ascertainable by a date 10 days prior to sentencing, the prosecutor or probation officer should advise the court, and the court must set a date for the final determination of the victim's losses, not to exceed 90 days from sentencing. At such hearing, the prosecutor has the burden of proving, by a preponderance of the evidence, the amount of loss sustained by each victim, while the defendant has the burden of proof regarding his financial circumstances. If the court finds more than one defendant to be responsible, the court can hold each defendant liable for the whole amount or may apportion the liability among defendants. Similarly, if there are multiple victims, a court may set different payment schedules for each, depending on the type and amount of loss and the economic circumstances of each victim.

Courts have held that a court does not lose jurisdiction to impose restitution by failing to hold the restitution hearing within 90 days after sentencing, where the defendant has notice that restitution is a part of the sentence. *See United States v. Moreland*, 622 F.3d 1147, 1171 (9th Cir. 2010); *United States v. Johnson*, 400 F.3d 187, 199 (4th Cir. 2005); *United States v. Cheal*, 389 F.3d 35, 49–50 (1st Cir. 2004); *United States v. Zakhary*, 357 F.3d 186, 191 (2d Cir. 2004); *United States v. Vandenberg*, 201 F.3d 805, 814 (6th Cir. 2000); *United States v. Grimes*, 173 F.3d 634, 639 (7th Cir. 1999). *But see United States v. Farr*, 419 F.3d 621, 623, 625 (7th Cir. 2005) (distinguishing *Grimes* and holding that the district court exceeded its authority under § 3664 to issue restitution because it did not do so within the 90-day time limit, where it did not order restitution as part of the defendant's original sentence, but 3 years later added restitution as a condition of defendant's supervised release).

VI. Calculating the amount of restitution

Both the MVRA and the VWPA provide that the court shall (MVRA) or may (VWPA) order the defendant to make restitution to the victim. The statutes provide that in an offense resulting in damage to, or loss or destruction of property, the defendant should return the property to the owner. If return of the property is impossible, impracticable, or inadequate, the defendant should pay an amount equal to the value of the property lost. *See* 18 U.S.C. § 3663(a)(1)(A), (b)(1); 18 U.S.C. § 3663A(a)(1), (b)(1) (2015). In most, if not all, wildlife cases, the wildlife has been killed and cannot be returned to the victim. If the property cannot be returned, courts are directed to determine the fair-market value of the wildlife. If a market value cannot be determined, the court may make a reasonable estimate using any reliable information, or may use this difficulty as a basis for not awarding restitution, even under the MVRA.

Wildlife restitution cases generally present one of three scenarios: (1) wildlife that can be legally harvested and sold, such as the lobster in *Bengis* and the striped bass in *Oceanpro*, (2) wildlife that can be legally harvested but cannot be legally sold, such as the deer in *Butler*, and (3) wildlife that cannot be legally harvested or sold, such as eagles, raptors, and other endangered species, like those in *Ross* and

United States v. Hugs, 507 F. App'x 738, 739 (9th Cir. 2013). Each type of scenario requires certain factual determinations before ordering restitution.

A. Determining market value

In cases where there is a legal market for the wildlife, courts can readily determine what the restitution should be. In *Bengis*, the Government provided two restitution calculation methods. Ocean and Land Resource Assessment Consultants (OLRAC) Method I focused on the cost of remediation, that is, what it would cost South Africa to restore the lobster fishery to the level it would have been had the defendant not engaged in overharvesting. OLRAC Method II focused on the market value of the overharvested fish and was calculated by multiplying the quantity of the overharvested fish by the prevailing market price. *Bengis*, 631 F.3d at 36–37. The Second Circuit held that OLRAC Method II was a sufficient loss calculation methodology. *Id.* at 41. The court concluded that had the illegal poaching been detected, South Africa would have been able to seize the illegally harvested lobsters at that time and sell them at market price. The court ruled that restitution in the case be determined by multiplying the number of illegally harvested lobsters by the prevailing market rates at the time the lobsters had been poached. A similar decision was reached in *Oceanpro*, where there was a lawful market for striped bass. Under both the laws of Maryland and Virginia, once the fish were illegally harvested, both states were authorized to seize the fish and sell them at market value. *Oceanpro*, 674 F.3d at 332.

B. Determining restitution when no legal market exists

Determining the value for wildlife for which there is no legal market can be difficult, if not impossible. In these types of cases, the court may calculate restitution by making a reasonable estimate of the “replacement” value of the wildlife. *See* U.S. SENTENCING GUIDELINES MANUAL § 2Q2.1 n.4 (2014); *United States v. Butler*, 694 F.3d 1177, 1181 (10th Cir. 2012); *United States v. Frazier*, 651 F.3d 899, 904 (8th Cir. 2011) (stating that when the value of the lost or destroyed property is difficult to ascertain—because it is unique or because there is no active market for it—an estimate replacement cost method should be used to value the property); *United States v. Ross*, No. 11-30101, 2012 WL 4848876, at *4 (D.S.D. Oct. 10, 2012). However, replacement cost is not the same as the cost calculated under a natural resource damage assessment process. For restitution, it is replacement cost for the specimens alone—for a damage assessment, the loss also extends to the potential offspring and future generations that the loss of the original specimen represents.

In determining the replacement value of the wildlife, courts can look to, and use, a variety of “reliable information” that includes use of expert testimony and affidavits outlining the costs of captive breeding operations. These can include the costs of reproducing, raising, and releasing wildlife, and also comparing costs in legal markets outside of the United States. *See United States v. Hugs*, 507 F. App'x 738, 739 (9th Cir. 2013); *United States v. Xie*, No. 13-1311 (S.D. Cal. Mar. 27, 2014); *United States v. Trinh*, No. 13-00510 (S.D. Fla. Nov. 12, 2013); *United States v. Blachford*, No. 3:12-30075 (D.S.D. Feb. 13, 2013); *United States v. Khanh Vu*, No. V-11-31, 2011 WL 2173690, at *3 (S.D. Tex. June 1, 2011).

The use of expert testimony and affidavits speaking to this calculation has been examined and upheld in recent decisions involving eagles, hawks, and other migratory birds. *See United States v. Hugs*, 507 F. App'x at 739; *United States v. Chauncey*, No. 13-30164 D.S.D. (Dec. 18, 2013); *United States v. Ross*, No. 11-30101, 2012 WL 4848876, at *4 (D.S.D. Oct. 10, 2012); Brief for Appellee at 1, *United States v. Jones*, No. 11-30016 (D.S.D. Oct. 17, 2012); *United States v. Littleboy*, No. 11-50025 (D.S.D. Jan. 5, 2012).

In *United States v. Ross*, the magistrate court was required to determine the restitution value for 16 hawks that were illegally killed by a commercial hunting lodge owner and his staff. The court, in determining restitution, looked to previous cases in the district and reviewed de novo the transcript of the expert testimony and affidavit outlining the costs to propagate, rehabilitate, and prepare such birds for

release into the wild. In determining these figures, the expert also considered the costs of rehabilitating injured raptors and the market value in countries where the trade in eagles and hawks was legal. The court adopted the values put forth by the expert and then multiplied the value times the number of hawks illegally killed to determine the final restitution amount. No. 11-30101, 2012 WL 4848876, at *4.

A district court in Montana followed the same approach as the court in *Ross*. See Brief for Appellee at 8, *United States v. Hugs*, No. 12-30209, 2012 WL 5332306, at *8 (9th Cir. June 14, 2012). It found that the fair market retail price was difficult to ascertain, further finding that the amount of money that actually changed hands in the transactions in the case undervalued the eagles that had been killed. The court determined that the replacement cost methodology outlined by FWS was a “credible, well-documented, and detailed account of the replacement or hacking of such protected birds.” *Id.* The Ninth Circuit affirmed the court’s reliance upon the sworn affidavit that included detailed information provided by an expert in the field. *United States v. Hugs*, 507 F. App’x 738, 739 (9th Cir. 2013).

C. Directing payments of restitution

When the court orders restitution, the order must provide the name and address of the victim to which the payment should be sent. This will be a simple matter where the victim is an individual, for example, the owner of a farmed deer that was illegally hunted, or a state or foreign government that had the right to seize and sell the wildlife. The individual or the state must provide to the prosecutor and court the appropriate information as to where payments should be directed. However, when the victim is the Federal Government, efforts to direct restitution to specific projects may be seen to conflict with the Miscellaneous Receipts Act. The Miscellaneous Receipts Act, 31 U.S.C. § 3302(b), provides that “an official or agent of the Government receiving money for the Government from any source shall deposit the money in the Treasury as soon as practicable without deduction for any charge or claim.”

To address the language of the Miscellaneous Receipts Act, an argument could be made that because the payment is restitution and intended to redress a specific harm (loss or damage to resources), the funds are not “money for the Government,” 18 U.S.C. § 3302(b) (2015), but instead are held by the Government for the benefit of the wildlife victim, which is itself unable to receive the funds and use them for its own benefit. This argument draws on the spirit of Justice Douglas, in his famous dissent in *Sierra Club v. Morton*, 405 U.S. 727 (1972), wherein he urged standing for environmental objects to sue for their own preservation. In this way, a prosecutor may be able to persuade the court to direct restitution payments to a specific fund that acts to benefit the wildlife or natural resource that was damaged by the defendant, such as the National Fish and Wildlife Foundation. The payment would not be made to the Foundation as a victim (which it would not be), but to the Foundation as trustee of the Government funds. These funds would then be directed pursuant to court order to particular expenditures that would act to truly make restitution of the harm. Assistant U.S. Attorneys should remember that this theory, as yet, has not been fully examined by a court or by the relevant executive agencies.

When a defendant makes payment to the court, any money received will be disbursed in the following order: (1) the penalty assessment, (2) restitution to all victims, and (3) all other fines, penalties, costs, and other payments required under the sentence. 18 U.S.C. § 3612(c) (2015). A fine will be paid before criminal forfeiture because it is payable to the court pursuant to 18 U.S.C. § 3611.

If property has been forfeited by the United States, and it appears that the defendant has no other assets with which to pay restitution, the prosecutor may petition the Asset Forfeiture and Money Laundering Section (AFMLS) of the Department of Justice for remission of the forfeited funds on behalf of the victims (who may also request remission individually). The prosecutor must certify in the petition request that: (1) all the victims are named in the judgment, (2) all the amounts are correct, (3) all losses are a direct result of the criminal conduct, (4) no named victim is an uncharged coconspirator or participant in the criminal activity, and (5) there are no other assets or resources of the defendant available to pay the restitution. The prosecutor must also advise AFMLS of the position of the seizing agency

regarding the request for remission. The ruling official may exercise discretion to decline to grant a request for remission if, for example, there is substantial difficulty calculating the loss, the number of victims is large, the amount of remission is so small as to make it impracticable, or the amount of remission is small in comparison to the costs to the Government to determine the amount of loss. The procedures for remission are set forth at 28 C.F.R. § 9.1–9.9.

VII. Conclusion

Restitution is an important and powerful tool in the enforcement of wildlife crimes. It is the opportunity to force “the defendant to confront, in concrete terms, the harm his actions have caused,” while at the same time redressing the damage to or destruction of natural resources. *Kelly v. Robinson*, 479 U.S. 36, 49 n.10 (1986). Prosecutors are urged to consider the restitution requirements and opportunities during all phases of the case (including the investigation, charging decisions, and plea negotiations), as the decisions made at those stages will impact the ability to later obtain restitution at sentencing. ❖

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