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Protecting Habitat to Save Species

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• UPCOMING EVENTS •

GOMA All Hands Meeting

June 10-13, 2019 Gulf Shores, AL

http://bit.ly/goma-5-10-19

ABA: Complex Environmental Liability Resolution

June 12, 2019 Atlanta, GA

http://bit.ly/aba-5-12-19

Gulf and South Atlantic Shellfish Conference

Aug. 3-7, 2019 Savannah, GA

http://bit.ly/gsasc-8-3-19

Table of Contents photograph courtesy of Tom Benson.

Lawsuit Threatened after ESA Protection Stalls for Mississippi Turtle

Kristina Alexander



In 2010, an environmental group filed a petition with the U.S. Fish and Wildlife Service (FWS) to protect 404 Southeast aquatic plants and animals under the Endangered Species Act (ESA). In 2011, FWS issued its 90-day finding under the act, finding that the petition demonstrated substantial scientific information that listing 374 of those 404 species was warranted. Some of those species had been brought to FWS's attention for protection as early as 1975. However, one species was not singled out until 2018. That species is the Pearl River map turtle (*Graptemys pearlensis*) of Mississippi.¹

Pearl River vs. Pascagoula Map Turtles

Map turtles (the genus *Graptemys*) are sometimes called sawbacks because they have ridges down their backs, often forming little spikes. They are not big turtles, although female Pearl River map turtles grow almost two-times as big as the males' maximum carapace length of 5 inches. Map turtles have simple needs: sandbars for nesting, snags for basking, and clean water with mollusks to eat. The Pearl River map turtle's exclusive habitat is the 444mile Pearl River (see map). The Pearl River map turtle shares this habitat with the ringed map turtle, which is a threatened species under the ESA. In 1990, FWS issued a conservation plan for the ringed map turtle, protecting 12 miles of the Pearl River north of the Ross Barnett reservoir.² The conservation plan did not end the Pearl River map turtle's population decline, however. According to an international organization that monitors species conservation, the turtle's population may have dropped by as much as 98 percent since 1950.³

At the time of the environmental group's April 2010 ESA petition to protect 404 species, including the Pascagoula map turtle, science did not demonstrate that the Pearl River map turtle was a different species than the Pascagoula map turtle (*G. gibbonsi*). It was believed, instead, that the Pascagoula map turtle's habitat spread across two rivers: the Pascagoula River and the Pearl River. Therefore, the theory was that the sawbacks in both rivers were *G. gibbonsi*. However, in June of that year, a study reported genetic and morphological differences between *G. gibbonsi* and *G. pearlensis*, providing the scientific basis for asserting a separate species. According to those scientists, the Pearl River map turtle (*G. pearlensis*) was an entirely different species than the Pascagoula turtle.

The ESA Listing Process

The ESA requires FWS to respond to petitions to list species within 90 days "to the maximum extent practicable" under 16 U.S.C. § 1533(b)(3)(A). In the case of the petition to list 404 species, a 90-day deadline seems impracticable, and it proved to be. For the *G. gibbonsi*, the turtle species for which protection originally was sought, FWS responded to the April 2010 petition in September 2011, finding that the petition presented substantial scientific evidence that listing *may* be warranted.

The next step in the listing process requires FWS to determine whether listing is warranted or not, and to propose listing the species as either endangered (likely to become extinct throughout its significant range in the foreseeable future) or threatened (likely to become endangered in the foreseeable future). This is commonly known as a 12-month determination, and the decision is published in the *Federal Register* to allow public comment. If FWS finds listing is warranted, the ESA requires FWS to publish the final listing determination one year after publishing the 12month determination. Each of these determinations must be supported by the best scientific evidence available. The ESA allows people to sue FWS if the agency misses deadlines. FWS frequently misses them, in no small part due to the limited budgets Congress authorizes for the reviews. In November 2018, the environmental group that filed the petition gave notice that it intends to sue. The ESA requires a notice of suit before a private party can sue the agency. It gives FWS a chance to correct the alleged violation.

How the Species' ID May Affect Listing

The environmental group argued in its notice of suit that G. pearlensis is a separate species from the taxon in the petition, G. gibbonsi. The group's original petition was filed just months before publication of the study concluding that the Pearl River turtle was a separate species. This may not be the first taxonomic name change in the middle of the ESA listing process. For example, FWS called attention to one of the 404 species in that group's petition, the Georgia blind salamander. FWS stated that the salamander changed from being the Haideotriton wallacei to the Eurycea wallacei, even though it was still known as the Georgia blind salamander.5 The fact that its genus was switched did not appear to give FWS pause in continuing that listing process. It is not known how FWS will react to the change in the species identification for the Pearl River map turtle, but the salamander's path might indicate that the existing petition would suffice. Otherwise, the listing process would begin again, and despite the statutory 90-day response period, it is likely FWS would take years to make its initial determination.

FWS has had notice of the scientific identification of *G. pearlensis* for years. The Pearl River map turtle is considered endangered or perhaps critically endangered by the International Union for Conservation of Nature (IUCN) which has it on its Red List since 2011. And FWS considers *Graptemys*, encompassing all map turtles, to be at such peril that it restricted trade of any map turtle under an international treaty – the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES).⁶

A CITES listing is the result of a narrower review than for an ESA listing. Under CITES, a species may be listed after the scientific community has evaluated the impacts of trade on a species' likelihood of extinction. It does not consider loss of habitat. The CITES trade restriction has been in place since 2006, during which time it appears the turtle's population continued to decline, suggesting that trade is the not the main factor putting the turtle at risk of extinction. Therefore, the ESA listing arguably is still needed to prevent the turtle from becoming extinct.



Habitat Loss

The group's notice of suit claimed that FWS "has abandoned its duty to ensure that endangered and threatened species are afforded protections in a timely manner, thereby avoiding further decline and increased risk of extinction."⁷ In particular, the notice points to the Jackson "One Lake Project" as posing a risk to the turtle's habitat. That project would dam the river to create a second reservoir on the Pearl River south of Jackson.

Habitat loss is a major reason prompting the petition to list those 404 species. According to the petition, development activities have impacted rivers across the southeast, such as dredging, channelization, and draining. Those activities change the quantity and quality of the waters on which aquatic species depend. A change does not have to be a toxic chemical to be harmful. Increased sediment in the water, for example, can be enough to harm the turtle, killing the mollusks the map turtle eats.

The Ross Barnett reservoir on the Pearl River is one of several U.S. Army Corps of Engineers projects that have adversely impacted the turtle's habitat, according to FWS.⁸ Additionally, the scientists who identified the genetic distinction of the *G. pearlensis* species observed "substantial channel filling" over 27 years has damaged the map turtle's habitat.⁹ As discussed, habitat change is more dire in the case of a species like the Pearl River map turtle that has a limited range. According to the petition "because many of the aquatic species in the Southeast are very narrow endemics or have experienced a dramatic range reduction, remaining populations are now susceptible to extinction from even relatively minor habitat losses."¹⁰

ESA Protection

Separate species of the same genus may be given different protection status under the ESA. The ESA allows listing of species, subspecies, and distinct population segments of vertebrate species. It is more important that the turtle is listed at all, to get the Pearl River map turtle under the protective umbrella of the ESA, than whether it is listed as its own species.

However, the Pearl River map turtle might get greater protection if it were found to be a distinct species. Here's why. The ESA requires people who are planning actions such as construction projects or changes in water discharges to weigh the impacts of those actions on protected species and their habitats. It must be evaluated whether that action is likely to "take" a species. In ESA parlance, "take" means to injure or kill an animal, or harm it by disrupting its habits. This includes actions that damage a listed species' habitat. Species with large-scale habitats may not respond as sharply to a deterioration in a part of that habitat as would a species that has only a narrow range. Having a limited range puts species at a higher risk of extinction, as the smaller the habitat, the fewer the options for adaptation and survival.¹¹



For example, if the Pearl River map turtle is listed as a distinct species from the Pascagoula map turtle, changes to the Pearl River would have an impact to the species' entire range. Whereas, if the turtle were the same as a Pascagoula turtle, harm to the Pearl River would have less significance over the species' larger entire range – which would include both the Pascagoula River and the Pearl River. It is possible, therefore, that an action damaging the Pearl River could be seen as a "take" to the distinct Pearl River map turtle, but perhaps not be considered a "take" if it is just another type of Pascagoula map turtle. Accordingly, an ESA listing of *G. pearlensis* might reduce harmful habitat changes by focusing the review of those impacts on only the Pearl River.

Conclusion

The threatened lawsuit will make FWS's position clear on whether *Graptemys pearlensis* is a distinct species needing protection. While predicting the course of litigation is a fool's game, it is fair to say that many notices of suit regarding FWS's failure to meet legislated deadlines result in legal settlements. For example, FWS entered a settlement agreement in 2011 after failing to meet ESA deadlines for over 600 species and being sued "dozens" of times.¹² Notably, the group that raised the *G. pearlensis* dispute elected not to enter that agreement despite being eligible. The difficulty in forcing a case to trial is that the court cannot make a listing determination on its own. It can only set a deadline for the agency to comply. That relief may be available more quickly via a settlement.

Kristina Alexander is the Editor of Water Log and a Senior Research Counsel at the Mississippi-Alabama Sea Grant Legal Program at the University of Mississippi School of Law.

Endnotes

- For details about the identification of the Pearl River map turtle, and its existing protection status under federal and state law, see Kristina Alexander, Small Critter, Big Problem: Protecting the Pearl River Map Turtle in Mississippi, ELR (March 2018).
- FWS, Ringed Map Turtle (*Graptemys oculifera*) Five-Year Review: Summary and Evaluation, p. 4 (2010).
- IUCN, ("While hard quantitative data are absent, available information indicates that populations of *Graptemys pearlensis* have declined by 80-98% since 1950...."). Construction of the reservoir began in 1960.
- Joshua R. Ennen, et al., Genetic and Morphological Variation Between Populations of the Pascagoula Map Turtle (Graptemys gibbonsi) in the Pearl and Pascagoula Rivers with Description of a New Species, Chelonian Conservation and Biology 9(1):98-113 (June 2010).
- 5. 76 Fed. Reg. 59836, at 59838 (Sept. 27, 2011) (its common name stayed the same).
- See, CITES, www.cites.org. FWS is the scientific authority of the United States for the treaty.
- Center for Biological Diversity (CBD), Sixty-day Notice of Intent to Sue (Nov. 13, 2018), p. 4. CBD attorneys did not reply to email requests for updates on the litigation.
- 8. 70 Fed. Reg. 74700, 74706 (Dec. 16, 2005).
- 9. Id.
- 10.76 Fed. Reg. 59835, at 59845 (citing Herrig and Shute 2002).
- 11. See, gen., Steven R. Beissinger, Ecological Mechanisms of Extinction, 97 Proc. Nat'l Acad. Sci. U.S. 11688, 11688-89 (Oct. 24, 2000) ("It is generally agreed that risk should be higher for species with small populations, small geographic ranges, and poor dispersal ability than for their ecological counterparts [...,but that size and generation length also affect survival]").
- 12. See, In re: Endangered Species Act Section 4 Deadline Litigation, No. 1:10-MC-00377 (D.D.C. May 10, 2011) (resolving claims between WildEarth Guardians and FWS by setting a 6-year schedule for listing; CBD chose not to participate in the settlement agreement although it had relevant claims to the action).

Newly Recognized Subspecies of Bryde's Whale Makes Endangered Species List

Rachel Buddrus



Introduction

The Gulf of Mexico Bryde's whale is clearly an endangered species when you look at the fact that there are approximately 33 individuals remaining.¹ Further, the entire population is confined to the northeastern waters of the Gulf of Mexico, although other populations of Bryde's whale are found in warm seas around the world. Despite these and other factors that indicate that the Gulf of Mexico Bryde's whale is an endangered species, the National Marine Fisheries Service resisted making a final determination on whether this subspecies of whale is an endangered species under the Endangered Species Act.

Marine Mammal Protection Act

The Gulf of Mexico Bryde's whale, is a unique subspecies of baleen whale almost exclusively found "in the DeSoto Canyon in the northeastern Gulf, off the Florida panhandle" (see map). Existing protection for the Bryde's (pronounced "broo-dus") whale is provided by the Marine Mammal Protection Act (MMPA). The MMPA was enacted in 1972 and meant to protect all marine mammals, including whales, within the waters of the United States by making it illegal to "take" marine mammals without authorization.² Under the MMPA, a taking occurs when people harass, feed, hunt, capture, collect, or kill any marine mammal. On its face, it may appear that the MMPA's protection would render listing the Bryde's whale under the Endangered Species Act unnecessary. However, the MMPA allows incidental taking of marine mammals as a result of oil and gas development, which is the largest threat to the Bryde's whale.³ This threat is likely to increase as the fourth of ten planned offshore land lease sales in the Gulf of Mexico occurred on March 20, 2019.⁴ This most recent sale leased about 1.2 million acres in federal waters for the purpose of offshore oil and gas exploration and drilling. Consequently, the MMPA may not be sufficient to protect the Bryde's whale and its narrow habitat. Many other species of whale are protected under both the Endangered Species Act and the MMPA.



Endangered Species Act

Asserting that the Marine Mammal Protection Act is inadequate to protect this species of whale, the Natural Resources Defense Council (NRDC) filed a petition to list the Bryde's whale under the Endangered Species Act. The Endangered Species Act of 1973 (ESA) was designed to provide protection and conservation for threatened and endangered species.⁵ A key part of the ESA is the creation and maintenance of a list of threatened and endangered species as defined and evaluated under the ESA. The ESA defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range..."⁶ It allows listing of species, subspecies, and distinct population segments.

The ESA is administered by two federal entities, the U.S. Fish and Wildlife Service (in the Department of the Interior), and the National Marine Fisheries Service (in the Department of Commerce). One of the protections offered under the ESA is protection for and conservation of the habitats that endangered species depend on. However, these protections are only granted to species that are listed as endangered or threatened. In order to list a species, a petition must be submitted to one of the federal agencies. This submission triggers a mandatory 90-day review period to determine if listing that species may be warranted. If it is found that listing may be warranted, then a 12-month review period begins. The agencies evaluate scientific criteria to decide whether to list the species. To some critics, this is seen as a counterintuitively lengthy period considering that many of these species are on the brink of extinction and are truly fighting the clock to survive.

Background of the Dispute

In 2014, NRDC submitted a petition to the National Marine Fisheries Service (NMFS) to list the Gulf of Mexico Bryde's whale under the Endangered Species Act. NMFS reviewed the submission and found that listing this species as endangered "may be warranted." Even though NMFS found that listing the whale may be warranted, NMFS failed to issue a 12-month finding on the listing within one year of receiving NRDC's petition. The 12-month finding is required under the ESA, so NRDC filed a complaint in May 2016 alleging that NMFS had failed to adhere to the timeline requirements of the Act. In response to NRDC's complaint, in December of 2016, NMFS found that listing the Bryde's whale was warranted and proposed listing the species as endangered; however, NMFS took no additional action to official list the species as endangered.

Action for Bryde's Whale

While waiting for an official action, NRDC filed a complaint for injunctive and declaratory relief in February 2019 based upon the claim that NMFS failed "to make a final decision, within the time required by statue, on whether to list the [Bryde's whale] as an endangered species under the Endangered Species Act." NRDC sought injunctive relief and a declaration that NMFS "violated the ESA and the Administrative Procedure Act in failing to make and publish a final determination on their proposed rule to list the [Bryde's] whale as an endangered species; and an order requiring [NMFS] to make and publish that final determination by a certain date."



On April 9, 2019, NMFS issued regulations listing the Bryde's whale as endangered under the Endangered Species Act.⁷ In its listing notice, the agency stated that the Gulf of Mexico Bryde's whale was found to be so genetically distinct from other Bryde's whale species that it was a distinct subspecies. While this action mooted NRDC lawsuit, the organization's overall legal strategy appears to have resulted in greater protections for the Bryde's whale subspecies in the Gulf of Mexico.

Conclusion

The next step in protecting this unique species is for NMFS to create and implement of a recovery plan, as required by the ESA.⁸ Recovery plans "identify actions needed to restore threatened and endangered species to the point that they are again self-sustaining elements of their ecosystems and no longer need protection." Recovery plans are not legally enforceable documents, rather they act as guidance for the conservation and protection of threatened and endangered species. Time will tell whether the Endangered Species Act, when implemented correctly, will make lasting impacts on the conservation of the Gulf of Mexico Bryde's whale.

Rachel Buddrus is a University of Mississippi School of Law Juris Doctor 2019 Candidate and worked as a legal intern with the Mississippi-Alabama Sea Grant Legal Program.

Endnotes

- Natural Resources Defense Council v. Ross, No. 1:19-cv-00431 (D.D.C. Complaint filed Feb. 21, 2019).
- 2. Marine Mammal Center, Marine Mammal Protection Act.
- 3. NOAA Fisheries, Marine Mammal Protection Act: Law and Policies.
- U.S. Department of the Interior, Gulf of Mexico Lease Sale Yields More Than \$244 Million in High Bids, Continues Upward Trend Under Trump Administration (March 20, 2019).
- U.S. Environmental Protection Agency, Summary of the Endangered Species Act: 16 U.S.C. §§ 1531 et seq. (1973).
- 6. 16 U.S.C. § 1532(6).
- 7. NOAA Fisheries, NOAA Lists Gulf of Mexico Bryde's Whales as Endangered.
- 8. NOAA Fisheries, Endangered Species Act Recovery Plans.
- 9. NOAA Fisheries, Marine Mammal Recovery Plans.

Lessons of the Waterdog: ESA & CWA Protections

Alex N. Dominguez

Introduction

The state of Alabama is home to 73 different types of amphibians, from frogs to salamanders, and everything in between. Many of these amphibians benefit from two specific environmental protection statutes: (1) the Endangered Species Act (ESA); and (2) the Clean Water Act (CWA). Under the ESA, species are listed as either "threatened" or "endangered," and governments, businesses, and individuals must avoid taking actions that may cause them harm. In addition, the ESA allows the Secretary of the Interior to designate "critical habitat" for areas essential to the conservation of the listed species. Further, under the CWA, aquatic species have been able to reap the benefits of improved water quality achieved through the listing of certain waterbodies these species call home. This two-prong approach to species protection can serve as a model for future protections of aquatic and amphibious threatened and endangered species. This article examines the case of the Black Warrior Waterdog to demonstrate the success of this approach.

Black Warrior Waterdog

Late at night in the Alabama Black Warrior River Basin, a nine-inch salamander snags small bugs resting on the river's surface. However, this is not just any salamander, it is the Black Warrior Waterdog (Waterdog), a species listed as endangered under the ESA.

The nocturnal Waterdog is dependent upon a very specific environment. This species is found only within the Black Warrior River Basin in the state of Alabama (see map), thriving in medium and large streams dominated by clay and bedrock with plenty of crevices and slabs to hide and rest.¹ In total, the range of the Waterdog spans only four Alabama counties: Blount, Tuscaloosa, Walker, and Winston.

The Waterdog is currently facing many challenges, the most significant of which is water quality degradation: "Changes in water chemistry and flow patterns, resulting in a decrease in water quality and quantity, have detrimental



effects on salamander ecology because they can render aquatic habitat unsuitable."² Sedimentation has also played a significant role in overall water quality degradation.³ Sedimentation is essentially the settling of solid particles, such as rocks and dirt, from the natural flow of the rivers and stream. While sedimentation is a natural process, it can be amplified to harmful levels by construction and development near waterways which disturb soils and increase runoff. As particles cloud the water, they cause physical alterations to the Waterdog's habitat resulting in a reduction in food sources, alteration to regular shelter, and the potential buildup of negative substances.

Listing the Waterdog

Recognizing these pressing threats to the species, on January 3, 2018, the U.S. Fish and Wildlife Service (FWS) listed the Waterdog as an endangered species under the ESA. By listing the Waterdog as endangered, FWS acknowledged that the Waterdog "is in danger of extinction throughout all or a significant portion of its range." However, this listing did not happen overnight; instead, it took decades.

In 1982, the Waterdog was placed on a candidate waiting list, meaning "proposed listing was possibly appropriate" but "substantial data on biological vulnerability and threats were not available to support a proposed rule."⁴ In 1996 the Waterdog was removed from the candidate waiting list, just to be added back to the list in 1999. In an effort to move the Waterdog off of the candidate waiting list for good, the Center for Biological Diversity (CBD) petitioned FWS in 2004 and again in 2010. After these failed attempts, momentum slowed, and the Waterdog remained on the candidate waiting list.

Tired of this lack of action, CBD took a more aggressive approach. After several conversations and the looming possibility of legal action, CBD and FWS reached a settlement in 2011 in which FWS agreed to decide by the end of the year whether or not to list the Waterdog and all other species listed on the 2010 candidate waiting list.⁵ While FWS action took longer than expected, on October 6, 2016, FWS initiated the listing process in order to move the Waterdog off the candidate waiting list and onto the official endangered species list. Two years later the Waterdog was officially listed as endangered under the ESA.

Upon listing under the ESA, the Waterdog received specific protections from "takings." Under the ESA, to "take," is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." In 1995, the Supreme Court held in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, that *significant* habitat modification was a reasonable interpretation of the term "harm" under the ESA definition of "take."⁶

In addition to "taking" protections, under the ESA, when a species is listed as endangered, FWS must designate critical habitat that is essential for conservation of the listed species. Therefore, upon listing, FWS designated 420 miles of the river in the Black Warrior River Basis, 127 of which were already designated as critical habitat for other listed species. This designated area includes four tributaries within the Black Warrior River Basin: Sipsey Fork, Locust Fork, Blackwater Creek, and Yellow Creek.



Efforts under the CWA

Ideally, the problems would end there, and the species would be on its path to recovery. Unfortunately, that is not the case with the Waterdog. In February 2019, the Black Warrior Riverkeeper (Riverkeeper), an environmental advocacy group, sued the U.S. Environmental Protection Agency (EPA) for failing to protect two Northern Alabama streams from pollution.⁷ Specifically, Riverkeeper alleged that the EPA violated the CWA through its "arbitrary approval" of Alabama's request to delist impaired waters without supporting evidence that these waters meet applicable standards. And Riverkeeper stated that the EPA "failed to consider *all* [emphasis added] relevant information about Alabama's waterbodies and pollutants as required." (Complaint, pp. 1-2.)

Under the CWA, states are required to identify waters for which discharge permits alone are not enough to implement applicable water quality standards. (Clean Water Act § 303.) These state waters are then ranked based on the severity of the pollution and the uses to be made of the water. Each state submits to the EPA the list of so-called impaired waters along with their ranking and maximum discharges of pollutants allowed into those waters. Removing impaired waters from the state list should occur when the identified pollutants are no longer occurring, but Riverkeeper's complaint contends that the rivers were removed from the impaired list without improvements in the water quality.

So, what does this mean for the Waterdog? Several of waterbodies approved for delisting are known habitat for the species and one, Big Yellow Creek, is currently designated as critical habitat. Removing these waterbodies from the list of impaired waters means they will no longer be scheduled for pollutant discharge limits, and "will be excluded from the subsequent implementation of waterquality based ... pollution control measures...." (Complaint, p. 2.) Removing these waterbodies from the impaired list may put the Waterdog's likelihood of recovery at risk. The Waterdog was benefiting from CWA protection by having the potential for reduced pollutants in its habitat. That potential ends when those waterways are no longer considered impaired under the act.

Conclusion

The protection history of the Waterdog under the ESA and CWA is useful to apply to other aquatic and amphibious species. It demonstrates the amount of pressure needed to push FWS to act in regard to ESA listings. In addition, the Waterdog's dependence on water quality illustrates the link between species protection and CWA, and reveals the risk of removing impaired waters from Section 303 lists when those waters are designated critical habitat. The Waterdog provides an example of how the ESA and the CWA must work hand in hand in order to protect endangered species.

Alex N. Dominguez is a University of Mississippi School of Law Juris Doctor 2020 Candidate and worked as a legal intern with the Mississippi-Alabama Sea Grant Legal Program.

Endnotes

- U.S. Fish & Wildlife Service, *Black Warrior Waterdog*. Facts provided throughout this section describing the Waterdog and its environment are based on information from this webpage.
- 83 Fed. Reg. 257 (Jan. 3, 2018). Facts provided throughout this article regarding the official listing of the Waterdog and the challenges it is facing are based on information from this *Federal Register* document.
- U.S. Fish & Wildlife Service, *Black Warrior Waterdog*. Information in this paragraph regarding sedimentation and its effects on the Waterdog are based on this FWS webpage.
- 4. 81 Fed. Reg. 69501 (Oct. 6, 2016).
- Center for Biological Diversity, Alabama's Black Warrior Waterdog Proposed for Long-awaited Endangered Species Act Protection With 669 River Miles of Protected Critical Habitat (Oct. 5, 2016).
- 6. 515 U.S. 687 (1995).
- Black Warrior River-Keeper, Inc. v. U.S. Environmental Protection Agency, No.2:19cv-00344 (N.D. Ala. Feb. 27, 2019). The facts throughout this section are based upon this complaint.

IN SUM.

A Summation of the Facts and Figures of Interest in this Edition

*	Estimated number of Bryde's whales in the Gulf of Mexico:	33
*	Number of threatened or endangered species in Mississippi:	50
*	Number of threatened or endangered species in Alabama:	132
*	States that have more listed species than Alabama:	3

The Local Food Movement and City Planning

Stephen Deal —

Recently, many nonprofits and urban dwellers are bringing food production into dense, inner-city neighborhoods far removed from typical agrarian providers. In the Gulf region, with its subtropical environment, plentiful rainfall, and warm climate, the local food production model seems like a logical fit. A look at successful local food operations in cities show what type of agrarian activities are in keeping with the social dynamic of a city, and the type of situations where local food production can affect the quality of life in urban neighborhoods. Local food success depends on how the economics behind local food production integrate into the day-to-day life of city dwellers.

The Economics Behind Local Food Production

Economic numbers taken over the past 30 years show that local food has become a small, but notable, niche industry in the American economy. Local food markets, where consumers can directly purchase food from farmers, have grown from \$551 million in sales in 1997 to \$1.2 billion in sales in 2007.1 Similarly, the number of farmers' markets in America has grown from 2,756 in 1998 to 5,274 in 2009. However, the farms that specialize in direct-to-consumer sales tend to be grouped around the urban corridors of the Northeast and West Coast. These numbers suggest that while local food operations have grown in abundance, they are still essentially a small, cottage industry growing in the shadow of wealthy, urban areas. In order to facilitate the expansion of local food into smaller urban markets and regions, it is important to understand the economic dynamics that give rise to local food ventures in the first place.

One economic facet of farming that local food advocates should keep in mind is that it is difficult to run an agricultural operation on production alone. Numbers from the U.S. Department of Agriculture reveal that 91



percent of American farm households have at least one family member working a non-farm job to make ends meet.² Thus, crop production is unlikely to be the only economic venture on a farm. Prepared food may help farms bridge the economic gap. Unfortunately, most small farms are at a distinct disadvantage when it comes to selling prepared food, as they don't have the time or resources to go through the different licensing, permitting, and inspection requirements typically associated with the sale of prepared food.

Recognizing this, many state legislatures have passed laws known as "food freedom" laws, which exempt homemade foods from permitting and inspection requirements.³ Food freedom laws contain key restrictions that inform the sale and exchange of homemade goods. For example, home production businesses must sell their goods to an "informed end consumer," which, in other words, means someone aware that they are buying something not regulated by the government. Food freedom products cannot be sold in grocery stores or out of state, and regulators retain the power to investigate any complaints of foodborne illnesses. Notably, the state of Wyoming expanded its food freedom legislation to include products such as raw milk, rabbit meat, and farm raised fish, with the exception of catfish. Since the passage of the 2015 legislation in Wyoming, however, no complaints have been linked to businesses operating under food freedom laws. Also, from an economic standpoint, the food freedom law has been a real shot in the arm to the local food movement. Wyoming has roughly 50 farmers markets statewide, a figure that has grown by 70 percent since the passage of the food freedom law in 2015.

Local Food in the Big Easy

In order to get a sense of what the local food movement can look like in the Gulf States, it only makes sense to turn to New Orleans, one of America's great food cities, to examine the farming initiatives taking place there. A 2014 article from nola.com indicates that there are around 200 growing or land-based projects based in New Orleans and a sizable majority of them are food gardens.⁴

One prime example of local food sourced in the community is the VEGGI Farmer's Cooperative.⁵ The cooperative is an outgrowth of the Mary Queen of Viet Nam Community Development Corporation, a group that represents the interests of the Vietnamese community in the New Orleans East neighborhood. At first VEGGI Cooperative was a food hub, which collectivized and marketed produce from local growers in the neighborhood, but eventually it grew to include neighborhood greenhouses that train gardeners on aquaponic growing systems. When VEGGI was first conceived it was as a way for out of work residents to receive a basic income while they looked for a way to reenter the workforce. By late 2010, however, many of the working-age people had either found new jobs or were cutting their hours back at the co-op, so a new group of residents stepped up to care for the gardens. Today, many of the primary workers at the garden are nominally retired, and spend five to six hours a day tending the garden. The growth and transformation of the gardens, both physically and demographically, show how local food can be a positive contributor to the rhythms of life in a large city.

A different type of urban farming in New Orleans is demonstrated by Paradigm Gardens. Paradigm is an urban farm that works closely with some of New Orleans finest chefs to produce specialty food items.⁶ The only comparable producer for these food items reportedly is located in Ohio, which means that local chefs save money if they can procure their food through Paradigm Gardens. In addition to its food operations, Paradigm has other revenue streams such as hosting school field trips, concerts, and other events at its facility.

With such a sizable number of food enterprises it becomes necessary to build a support network to encourage and support these fledgling ventures. This is where Edible Enterprises steps in. Edible Enterprises is a commercial kitchen and food incubator, which is operated by Goodwill Industries of Southeast Louisiana.⁷ The purpose of the kitchen is to provide home-based business owners with experience in food preparation and to give them a space where they can prepare potential products. The facility houses three fully equipped kitchens, but it also provides unique machines helpful in preparing homemade products for distribution, such as an automated wraparound labeler that can label more than 100 bottles per minute.

Fair or Fowl: Raising Livestock in Urban Areas

While few urban dwellers object to growing crops within city confines, raising animals for the purposes of food production may have negative spillovers or externalities associated with them that planning professionals must be mindful of. Chickens are likely the most common urban livestock. A survey compiled in 2013 estimated that one in every 100 households in the United States keeps chickens.8 Chickens raised in urban or semi-urban areas are commonly known as backyard chickens. Proponents of backyard chickens often point out their value as egg producers, the benefit of using their waste as yard fertilizer, and that they are low maintenance animals.9 A number of city residents are expressing concerns about backyard chickens though, citing the noise and smell produced by chickens and the potential for chickens to attract rodents and large predators.10 The debate over backyard chickens has spurred a larger debate whether urban livestock ventures are in keeping with the social and cultural life of a city.

Local regulatory responses to backyard chickens have been varied, ranging the gamut from prohibiting all livestock in city limits to devising guides and a permitting process to promote the proper care and maintenance of chickens. In the city of Vancouver, Canada, backyard chickens are promoted as being useful in developing personal sustainability and helping the city become more green. To encourage residents to buy a clucking companion of their own, Vancouver's regulations allow up to four hens per lot and residents can consult the city's online guidelines to learn more about keeping chickens.¹¹ The city, however, still bars ducks, turkeys, and other livestock within the city, and chickens are allowed only for egg production.

A robust regulatory apparatus for animals can be difficult though since laws dealing with urban livestock tend to be multilayered.12 Laws such as zoning ordinances, animal control ordinances, and public health ordinances all can have a direct effect on the regulation of livestock. However, planners may lack specific skills and knowledge necessary to address questions about livestock. Planners may look to coordinating their rules and regulations with nonprofits and agencies devoted to the responsible care and treatment of animals. In the city of Fort Collins, Colorado, for example, local regulators let the Larimer Humane Society handle the permitting process for backyard chickens.13 Since legalizing backyard chickens in 2008, the Larimer Humane Society has issued nearly 700 total permits for keeping chickens. This system provides limited regulatory oversight to an organization with considerable knowledge of animal care and which has a compelling interest in seeing that animals are properly handled and taken care of.

In addition to utilizing local expertise on animal welfare, planners should also take time to evaluate how local livestock laws will interact with the zoning code, determining whether livestock should be restricted to a few key zones or permitted across all land use spectrums. In the city of Mobile, Alabama, a wide range of livestock is permitted within city limits. However, keeping livestock is allowed only in residential agricultural zones, with the exception of chickens and bees, which are allowed in all residential zones. Another approach by communities is to permit livestock in all residential zones but to place restrictions on the minimum lot size necessary to keep livestock animals.

Conclusion

Small-scale food production in cities can be a valuable addition by promoting economic agency and providing a greater array of diversity in city uses and activities. There is an inherent tension, however, between local food in urban areas and maintaining public health standards. Though growing crops in vacant lots does not impinge upon the life of a city, raising chickens or other livestock in urban areas might be detrimental to city health without appropriate guidance and oversight. Local food ventures located near metropolitan areas must also be nimble and creative and diversify their goods and services to stay afloat. However, if local food operations are cultivated by local residents, they can grow and prosper over time and provide the fruits of social resilience and economic vitality.

Stephen Deal is the Extension Specialist in Land Use Planning for the Mississippi-Alabama Sea Grant Legal Program.

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Editor: Kristina Alexander

Publication Design: Barry Barnes

Contributors:

Rachel Buddrus Stephen C. Deal Alex N. Dominguez





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