Congress is poised to revise a 1973 law that critics say hasn’t worked and that defenders say needs to be strengthened. What has it done for the species on the list?

What’s Wrong With the Endangered Species Act?

The California gnatcatcher needed help. With more than 80% of its habitat gone by the late 1980s and populations plunging, the diminutive songbird that lives in coastal sage scrub in southern California seemed to birders and environmentalists to be a deserving candidate for listing under the Endangered Species Act (ESA).

The birds’ decline was equally alarming to land developers, but for a different reason. Worried that invoking the act might put a stop to new housing and other development on valuable real estate, some developers challenged the U.S. Fish and Wildlife Service’s (FWS’s) proposal in 1991 to list the gnatcatcher. And although they lost a 2-year court fight, their arguments shaped the 1993 decision by the government to grant protection to the bird.

Specifically, federal officials drafted a rule that allowed some birds to be harmed as long as the developers participated in an innovative state planning program. The goal was to coordinate conservation of larger blocks of habitat and encourage conservation not just on federal land but also on private lands, where most of the birds are thought to live. But although the plan has lessened conflict, it didn’t end it. Some environmental groups felt that developers were given too much leeway, and they successfully sued FWS again to win further protection for the gnatcatchers’ habitat.

And what has become of the gnatcatcher? Some 15 years after its plight was first addressed, biologists think it has a good shot at survival. But no one knows exactly how the bird is faring—or whether it has a better chance because of the listing.

Such is the uncertain, conflicted world of the ESA. Passed in 1973, it’s been called the strongest conservation law in the world. Yet it has serious flaws. The ESA forbids anyone from harming the gnatcatchers, for example, but it doesn’t mandate helpful actions, such as enlisting landowners in a recovery effort. In addition, clear measures of success are hard to come by. Even when the law motivates conservation partnerships among public and private organizations, it’s rare to know how much—or even whether—species are benefiting. At the same time, the act has upset private landowners and frustrated businesses. And never-ending legal battles have drained scarce resources from conservation efforts.

Environmentalists don’t accept Pombo’s assessment of ESA’s performance. The fact that 99% of the 1268 species listed are still surviving, they say, shows that the act is taking care of business. They fear that many of Pombo’s changes would weaken the act’s ability to protect endangered species. “We were very disappointed” by Pombo’s bill, says Jamie Rappaport Clark of Defenders of Wildlife, a former chief of FWS. “It will not only undermine species recovery but lead to more extinctions.”

Clark and others want Congress to make the ESA more capable of putting imperiled species on the road to recovery. A large infusion of funds is vitally needed to help federal agencies clear up a backlog of pending listings, handle the vast amount of administrative work needed to implement a listing, and carry out on-the-ground conservation actions. Failing that, they say, legislators should at least streamline procedures for listing and improve the recovery planning process. “I’m not convinced that at this point we need to tinker with the act,” says ecologist Gordon Orians of the University of Washington, Seattle. “We need to put more money into it.”

The long-awaited bill is on an extremely fast track. Pombo’s committee approved the bill barely 24 hours after holding a hearing, and the entire House of Representatives could do the same as early as this week. That pace has irked moderate Republicans, who say they need more time to study the bill. The Senate is moving more slowly, however, and is not expected to take up a comparable measure before next spring.

A growing backlog
Enacted in 1973, the ESA amplified the powers of a similar law passed in 1966. It’s...
intended to prevent landowners, private or federal, from doing anything—building a house or a road, logging a forest, etc.—that would harm a listed species. “It’s an innately powerful law,” says Lance Gunderson of Emory University in Atlanta, Georgia. “Some people call it the pit bull of legislation.” As a result, adds Dan Rohlf of Lewis & Clark Law School in Portland, Oregon, “the ESA has put conservation on the table in a lot of places where it would never have been on the table.”

Unfortunately, in many cases the action takes place in a courtroom. For opponents of the act, the first response to a proposed listing is typically a suit claiming that the scientific underpinnings for the FWS decision are weak. As of this month, FWS was engaged in 61 lawsuits related to various aspects of the listing process. It’s also dealing with court orders in 51 other suits.

Pombo and other opponents say they want to strengthen the scientific judgments upon which agencies act by requiring listings to meet more rigorous standards of evidence. They point to the 15 species that have been delisted after subsequent research revealed that populations were actually more robust than previously thought, and the 39% of listed species whose status is unknown (see data box, p. 2152). FWS now uses the “best available science” in deciding whether to list a species and determine its status; Pombo’s bill calls for the Interior and Commerce secretaries to define what “best” means.

Environmentalists object to that change. They say such political appointees could set the bar prohibitively high, especially if little is known about a species. Congress intended the act to be precautionary, they say: When extinction is at stake, it’s better to be safe than sorry.

Despite that mandate, FWS has had a difficult time adding species to the list. A historical rate of listing roughly 40 species a year has fallen to only about 13 during the 45 years of the Bush Administration. The backlog is sizable, with 286 “candidate” species on the FWS waiting list. On average, these candidate species have been waiting for 17 years. And since 1973, 27 species have gone extinct while on this list.

The current waiting list is likely just a fraction of the real backlog. According to NatureServe, a nonprofit clearinghouse for conservation biology, more than 9000 species in the United States are eligible for ESA listing. The waiting list could swell considerably if the agencies begin to put more emphasis on invertebrates and plants. “There are far more declining species become dimmer and more expensive over time.

A rocky recovery

For species that have been listed, proponents insist, the act is helping to stave off extinction. A prime example is the California condor, listed in 1967. It would never have survived without the legal protection and tens of millions of dollars provided by the act, says Michael Scott of the U.S. Geological Survey in Moscow, Idaho, who ran the program from 1984 to 1986.

Only nine listed species have gone extinct, and many were effectively doomed by the time they were listed. It could have been worse: In 1999, Mark Schwartz of the University of California, Davis, made a back-of-the-envelope estimate that roughly 190 species would have gone extinct without the act.

The act has been much less successful at helping species fully recover. Before species can be taken off the list, they must have healthy populations and adequate habitat. FWS has determined that nine species have reached that mark, all with threats that were relatively easy to address. For bald eagles, the biggest threat was DDT, which weakened their eggshells, and a 1972 ban on using DDT paved the way for their recovery.

For most species, however, recovery is still a distant goal. In 2002, just 6% were improving, and only 2% have accomplished more than 75% of the goals spelled out in their recovery plans. Scientists pin that poor record on the precarious state of most species when they were listed and inadequate recovery actions, not ESA itself. “Recovery will require many more decades than the three that the act has been in existence,” says Michael Bean of Environmental Defense in New York City.

Kemp’s Ridley sea turtles, for example, which were listed in 1970, require 15 years or more to reach maturity and to begin reproducing once researchers release hatchings.

The first—and the most controversial—step toward recovery, according to the act, is for FWS to designate so-called critical habitat. The law defines this as an area essential for a species recover. Critical habitat affects only the actions of federal agencies, which must consult with FWS or the National Oceanic and Atmospheric Administration (NOAA) if a proposed action—a timber sale, say, or highway construction—will harm the critical habitat of a listed species. Yet many landowners still fear that designation will restrict their actions, delay projects, or decrease property values. Such disputes usu-
ally end up in court, tying the agency in knots and delaying other conservation actions.

FWS and NOAA have been extremely reluctant to designate critical habitat. Since 1981, they have maintained that the process eats up time and money without providing any additional protection to listed species. The reason, they say, is that the ESA already prohibits harm to listed species, and that degrading the critical habitat amounts to the same thing.

Although there’s no doubt that species need habitat, the scientific evidence for benefits from officially designating critical habitat is not clear. Two studies that analyzed the same data in different ways have found that designation hasn’t correlated with improved recovery. Environmental groups say that critical habitat does matter and supports say that the biggest obstacle to conservation actions.

Environmental groups say that critical habitat does matter and that degrading the critical habitat amounts to the same thing.

Although there’s no doubt that species need habitat, the scientific evidence for benefits from officially designating critical habitat is not clear. Two studies that analyzed the same data in different ways have found that designation hasn’t correlated with improved recovery. Environmental groups say that critical habitat does matter and supports say that the biggest obstacle to conservation actions.

Money matters
Supporters say that the biggest obstacle to recovery for listed species is limited resources for implementing recovery plans—FWS documents that not only lay out the goals and methods for improving the population but also the amount of time and money the agency thinks will be required. In a 2002 Bioscience paper, Julie Miller of the University of Montana, Missoula, and colleagues found that birds and mammals were getting only about 50% of what had been recommended in recovery plans between 1989 and 1995, and that plants received just 20%. Boosting the current investment by about 25% for species on the list in 1999, they found, would have required almost doubling the recovery spending, from $350 million to $650 million. The study also found, as have others, that species that receive more dollars tend to do better.

Pombo’s bill wouldn’t give agencies any more money. In fact, their budgets could shrink under a provision that would require agencies to compensate landowners for the fair market value of any development or other activity that the government vetoed because it would impact endangered species. The bill doesn’t estimate the annual cost of such payments but specifies that the Interior Department must pay them. Suckling worries that these settlements could easily consume FWS’s $143 million budget for its endangered species program.

Despite the disagreement about whether to compensate owners for lost opportunities, all parties agree that conservation efforts would be aided by boosting incentives for landowners to help recover species. More than half the species on the ESA list have at least 80% of their habitat on private lands. Although the act can prohibit property owners from harming a species, it can’t force them to help, say, removing an invasive species that is causing trouble. That’s why in the last 10 years FWS has significantly expanded the use and funding of agreements called Habitat Conservation Plans (HCP). Since 1982, the number of these plans has risen to almost 500.

HCPs allow the “take”—harming or killing of listed species—as long as the landowner has a plan in place for mitigating the effect. Some environmentalists support this approach, but others worry that the HCPs don’t go far enough to bolster recovery efforts or even to monitor the status of species (Science, 13 June 1997, p. 1636).

One controversial feature of the HCPs, in effect since 1995, is a “no surprises” clause that locks the current plan in place. Critics say it doesn’t account for further declines or the discovery of additional endangered species. They would also like to see more oversight and proof that voluntary agreements help listed species. Supporters, in turn, complain that getting these agreements in place, and funded, is cumbersome and slow.

Pombo’s proposal would turn the “no surprises” policy into law and thereby increase the public’s confidence in the certainty of the regulatory process. But the bill would ease regulations in some worrisome ways, critics say, for example, by allowing projects that might harm endangered species to go forward unless federal agencies object within 180 days. “The FWS couldn’t possibly deal with all the requests” in that time frame without new resources, says Bean. “This runs the risk of foregoing the opportunity to constrain a whole host of development that could wipe out species.”

Although the act is the most powerful tool available for halting actions that could harm species, it’s become clear over 3 decades that its regulatory hammer isn’t enough. Many environmentalists agree with Pombo that landowners must be encouraged to find new ways to protect species and lessen their reliance on litigation. But in making those changes, the bill would also weaken the act’s regulatory authority. Opponents are hoping that the Senate will do less damage to those powers when it takes up the issue. But it seems unlikely that the final product, without cash to back it up, will significantly improve prospects for endangered species.

—ERIK STOKSTAD