

Immense Value of Tiny Fish

The vital role forage fish play for an endangered bird

By Rick Evans



Searching desperately, he looks down into the deep blue water below. A silvery cloud shifts just beneath the surface. It's the sight he's been waiting to see. With his wings locked back, he plunges down head-first into the cold Pacific water. His beak closes tightly. Success! He comes back up with his silver prize, a Northern anchovy.

Along the Southern California coast a small endangered bird known as the California least tern uses the sandy shoreline to breed and nest during the spring. These birds are entirely dependent on forage fish to survive, especially anchovies. "[F]rom the time it's born and throughout its life...[forage fish are] it's primary diet," says Susan Sheakley, Chairman of the Conservation Committee for the [Sea and Sage chapter of the Audubon Society](#).

In November, she went to San Diego with fellow [Audubon associates](#) to give a presentation before the Pacific Fisheries Management Council, urging them to implement stronger regulations of forage fish like the anchovy. "We felt encouraged because they asked questions," said Sheakley.



Photo by Rick Evans

The terns need a constant supply of forage fish. The males use them in courtship displays, offering them to chosen females. Once she accepts the fish, mating can take place. When chicks have hatched, the adults immediately begin feeding them whole fish.



Photo by Rick Evans

Sheakley affectionately refers to these chicks as, "little fluffy walnut sized," birds who cannot yet fly or dive for their own food, but will soon need to know how and what to eat. So, it is important the fish be small enough for them to consume. Without forage species like anchovies and sardines, these endangered birds might

be further imperiled and could possibly suffer catastrophic declines.



Photo by Rick Evans

According to a [report](#) by [The Pew Charitable Trusts](#), anchovy numbers have not been effectively measured since the '90s when a population downturn was detected. Since then, the commercial fishing industry has increased allowable catch limits. The Pew Charitable Trusts has joined Audubon in a call to devise more comprehensive science-based stock assessments of forage fish.

Forage fish are small fish, usually only a few inches in length, that feed on plankton and serve as a major food source for the entire marine ecosystem. This group of fish is comprised of species like sardines, smelt, anchovies, krill, shrimp and squid. Larger animals such as whales, seals, tuna, sharks, and seabirds rely heavily upon these little nutrient-rich fish.

They have also become important for human usage in fertilizers, pet food, livestock food, and health supplements, making them valuable targets. It has been [reported](#) by the [Lenfest Forage Fish Task Force](#) their worth is about \$5.6 billion for the commercial fishing industry when caught, but may be worth close to \$11 billion if left in the water due to their ecological impact.



Photo by Rick Evans

It is imperative to act now to ensure the endangered California least tern, among other animals, continue to have access to this invaluable resource. Regarding the terns, Sheakley warns, “[T]hey’re already in a tough spot. And a lot of that is because they’ve lost a lot of their habitat and their nesting area. And perhaps their food source.”



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