

Half-Pint Predator Battles For Survival

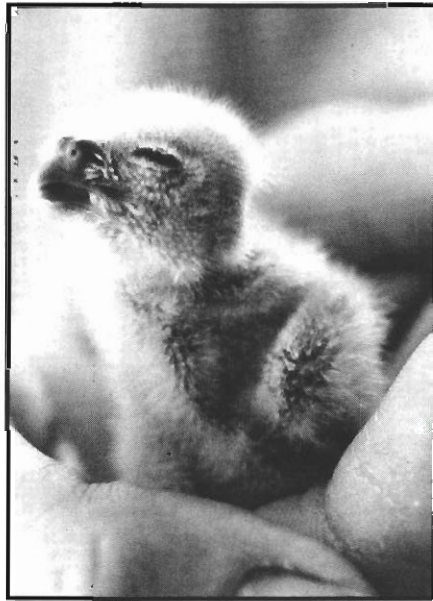
*When you're an elf owl, even a woodpecker can
size you up for lunch*

On the UCSC campus, Predatory Bird Research Group director Brian Walton and a handful of underpaid staff and volunteers are highly respected for their nationally recognized peregrine falcon captive breeding program. In 1972 there were only a handful of breeding pairs in all of California. In Southern California the bird had disappeared. Last year alone, Walton and company released nearly 50 falcons on the West Coast. And, though there are still egg-related problems left over from pesticide contamination, the species is much better off than it once was. Thanks to the Santa Cruz-based group, there are now nesting pairs on skyscrapers in downtown Los Angeles, as well as along the Big Sur coast.

Success has brought new challenges. The Predatory Bird Research Group is now doing its best to save the impish-looking elf owl. This tiny predator is an endangered species in California. Among other things, the elf owl is the smallest predatory bird in the world. And, judged by human behavioral standards, it is an admirably amorous fluff of feathers that courts and bonds with a flair and loyalty that would make any marriage counselor ecstatic.

Even while talking with sober-minded biologists as they plan strategies to save the diminutive bird, the comical aspects of rescuing a half-pint predator surface. Walton says with a grin, "Their size is somewhat deceptive. When we put one on the scale nothing really happens. Feathers don't weigh a lot and with or without them an elf owl doesn't amount to much."

It does seem ironic for a predatory bird to lack the size to take on a sparrow or even a spunky dragon fly, but that's where the elf owl finds itself among the



world's creatures — tough but tiny. It lives in mortal fear of such apparent light-weights as robins and woodpeckers.

Despite its size, the elf owl was doing well until man manipulated the environment, destroying and altering its habitat. The death of nesting trees resulted from damming the Colorado River and human desert users around oasis areas have done the elf owl a disservice. In many ways the owl is a victim of man's attempt to provide water to cities in Southern California. Undisputably, the elf owl's teenie stature pitted against the unquenchable thirst of the desert megatropolis known as Los Angeles gives the elf owl top underdog status. And, if that's not enough to create sympathy and support for the bird, their behavior ought to help.

Elf owls yelp like a puppy during courting. The male does his best to en-

tice a reluctant female into his hole-in-a-tree-or-cactus home with calls and daring stunts like hanging upside down in front of her and staring into her eyes. When the seduction is complete, the female squeaks in what might be interpreted as glee during four second love-making trysts. But, any description of an elf owl eventually perches on size, or lack of it.

The tiny owls use their pin-like talons and pebble-sized beaks to chase down such formidable prey as crickets, centipedes, beetles, scorpions, and on rare occasions the smallest of mice. Elf owls have as much, if not more, fearlessness and ferocity as better known large predatory birds. They have no choice. With elf owls the scale of things becomes microscopic and understanding them, because of their size and nocturnal nature, becomes difficult. Their babies only weigh five grams at birth (28 grams equal one ounce) and are about the size of a dime. An adult elf owl is pushing "heavy weight" status when it tips the scales at 45 grams (under two ounces).

When the Predatory Bird Research Group focused on the plight of the elf owl, all they knew for sure was that the owls were disappearing at a rapid rate from their desert haunts in Southeast California.

Walton explains his approach to working with a bird with so many unknowns: "We knew the owls weren't falcons and would present us with new challenges. But, we thought some of the things we'd learned with falcons and other raptors would help us get off to a good start."

Working with the California Depart-



PHOTO BY BRIAN WALTON

ment of Fish and Game it was decided that a captive breeding program similar to the successful peregrine program would be the primary objective.

Biologist Gail Naylor, who at the time was a mainstay of the incubation and brooding aspect of the peregrine recovery effort, made elf owls her pet project. Armed with an aluminum ladder and a portable brooder, Naylor located some elf owl nests and took twelve chicks from their saquero cactus homes in Arizona where the birds are more plentiful. Walton and Naylor had con-

structed a special owl enclosure and developed meal worm and cricket hatcheries to feed the new arrivals that were rushed to the Santa Cruz facility during the night.

There were some unpleasant developments. Three died from stress-related problems shortly after arriving. (In the wild a 50 percent newborn mortality rate for many species is common.) The nine survivors were kept together in a single cage. "We weren't able to determine their sex," Walton explains, "so by putting them together we would

be able to determine sex by their behavior as they matured. Also, elf owls seem to like being around each other before they've chosen a mate." Naylor and Walton had crossed their fingers hoping the surviving birds were pairs rather than predominantly of one sex. As it turned out Naylor had made some lucky grabs. Four monogamous pairs emerged from the nine surviving birds, and they mated, laid eggs, and set up normal nesting habits.

However, there was a problem. For unknown reasons most of the eggs died

in their first week of incubation. During the first spring ('84) only four chicks survived. Three were released in the wild. In 1985 the four pairs produced 24 eggs, which is probably close to the number of elf owls in the wild in California, but only one chick hatched from the effort. This has left Walton concerned but undaunted. "We'll solve the problem eventually. We're still off to a pretty good start. We have healthy breeding pairs with great egg production. Once we resolve the egg mortality problem, we'll be quite productive."

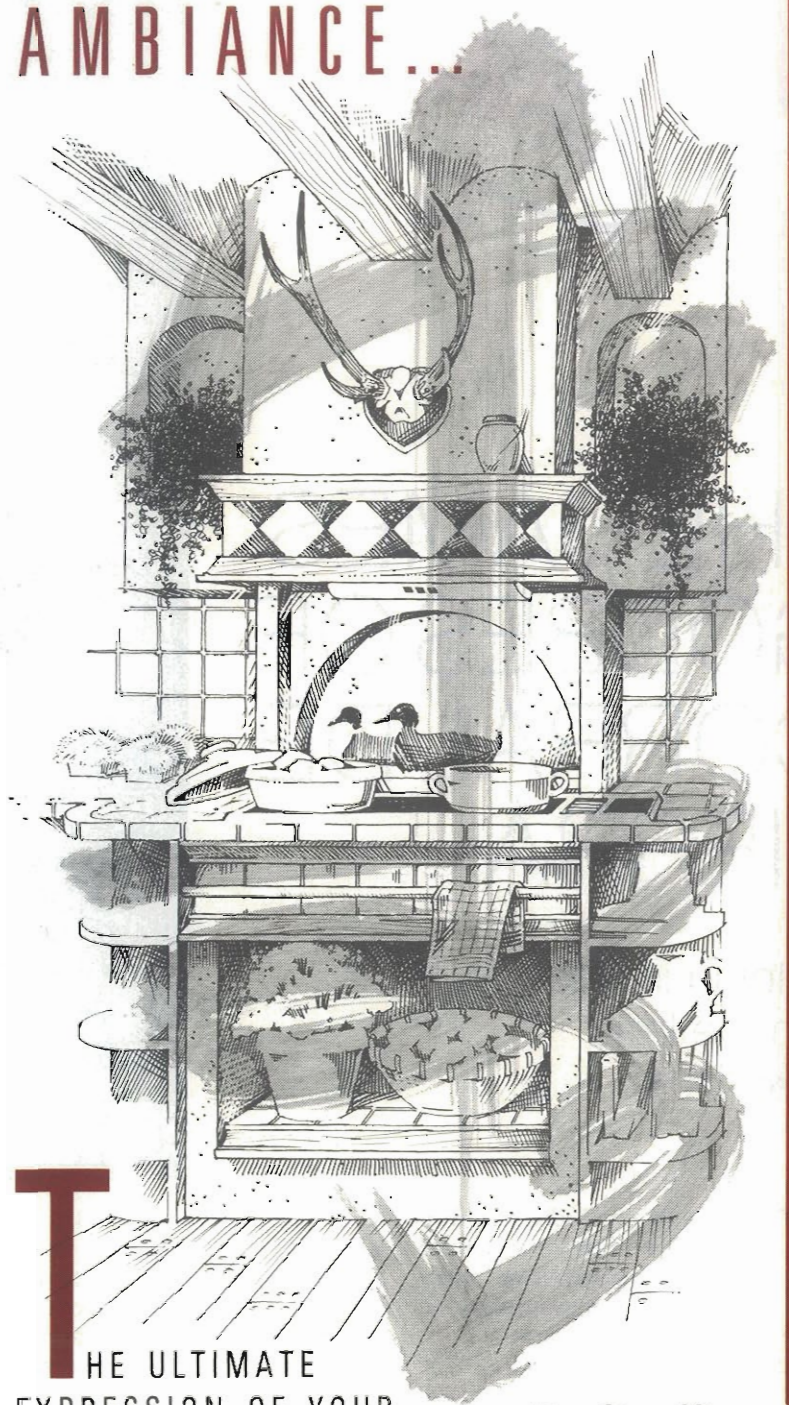
Walton sees two possible culprits. In other birds, egg mortality often indicates dietary problems. Even though healthy, often freshly mashed insects were provided, little was known about the complete diet baby owls are fed in the wild. "We've strengthened the diet with vitamins, more protein, and meal worms that have been fattened on enriched food," says Walton.

Walton also wonders if the cooler Santa Cruz climate forces the desert birds to leave their nests for food too often to maintain their body temperature. "The owls have fast metabolisms and must eat quite a bit, especially on cold nights. If they must leave their eggs too frequently, the eggs chill and suffer." To combat this problem, Walton had hot water pipes plumbed through the cages to offset chilly nights. How important these two factors are won't be known until spring of '86 when Walton hopes the survival rates will dramatically increase.

In the meantime Walton hopes what is eventually learned about elf owls will benefit other endangered owls around the world. In the Monterey Bay area there are five species of owls ranging from the chicken-sized Great Horned owl to the robin-sized Pygmy owl. None are endangered, but in other parts of the world many owls are not holding their own. Says Walton: "Naturally, I hope the elf owl program benefits the species, but I also hope it becomes a model for other like-minded organizations that are faced with saving a species from extinction."

(Tours of the Santa Cruz Predatory Bird Research Group are arranged through appointment only by calling (408) 429-2466 at least several days in advance. Tax deductible contributions can be sent, payable to the Santa Cruz Predatory Bird Research Group, Lower Quarry, University of California, Santa Cruz, CA 95064.)

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