A Sample of Owl Studies

Many reference books on owls have done a comprehensive job of cataloging studies about owls. These works are valuable, but the volume of facts and information often omits detailed discussions about how the information was obtained. Reference books, by necessity, do not effectively convey the sense of excitement experienced by the investigator, nor do they have an in-depth, first-person perspective about the context in which the work occurred.

Who better to convey this spirit of adventure than the investigators themselves? I was therefore pleased when several friends and colleagues from around the world enthusiastically agreed to provide personal accounts of their work for inclusion in this book. The result is a sample of perspectives of contemporary owl studies. Keep in mind that there remains much to be learned about the biology and ecology of owls. More questions arise from each study undertaken. The unsolved mysteries of the natural world are a deep well from which students, scientists and curious people thirsting for knowledge can drink for their entire lives.

Female Desertion in Southern Boobooks

by 
Jerry Olsen and Susan Trost

Most ornithologists know about the separation of home duties that characterizes birds of prey during the Compressed plumage, erect ear tufts and eyes closed to mere slits are features of the concealment display of smaller owls. This eastern screech owl keeps a peeping eye on the photographer at all times.
breeding season. The larger female does most or all of the incubating of eggs and brooding of small nestlings, while the smaller male does almost all of the hunting. While males travel long distances from the nest in search of food, females stay back and defend, often fiercely, the nest, eggs and young against predators, including humans. What is less known about some raptors, such as screech owls and Cooper's hawks in North America, and southern boobooks in Australia, is that they show an even more lopsided partitioning of duties after the young fledge. After the young have been out of the nest for some days, but are still dependent on parents for food and protection from predators, many females don't do their part—they refuse to defend or feed their dependent young, even when these fledglings sidle up to them on a

Southern boobooks are the smallest of the nine owl species that breed in mainland Australia.

A young southern boobook chick peers out from its nest cavity.
branch and beg. Females abandon all duties to their mates. Ornithologists call this "female desertion," and we can use what we know about southern boobooks to explain it.

Each year since 1993 we have studied three or four territories of southern boobooks in the Aranda Bushland and Black Mountain Reserve across the road from our houses in Canberra. We find the nests of three or four adjacent pairs, colormark the adults and radio-tag those we can; we fit some with a backpack-style Sirtrack single-stage transmitter with a string harness and a weak link designed to break if entangled. The total weight of the transmitter and harness (.2 oz/6.4 g) is about 2% of the owl's body weight at capture. When we trap a breeding pair, we determine that the largest of the pair by weight, often with a brood patch (a bare patch of skin on the breast of the female used to heat the eggs during incubation), is the female. For our convenience, and because it is an active time for owls, we observe them during the 60- to 90-minute period beginning a half hour after sunset.

When first entering the forest we peer with binoculars up into the foliage where the owls hide by day. When we find them, the owls watch us, standing upright on the highest leafy branches, tilting their faces down at 90° and looking at us past their breast feathers and through their toes. Sometimes they roost in native cherries, at eye level, and walkers and joggers pass close by and don't notice them.

The fledged young sit next to their parents, sometimes along one limb touching shoulders, the brown-feathered adults next to the cream-colored juveniles. The just-fledged young are most endearing—creamy white and stubbytailed with round bodies and dark bandit masks over their eyes, like raccoons. On partly feathered wings, they struggle to fly and they give persistent cricket-like trills as they move around through the forest after sundown, like children blowing little whistles in the dark. While the fledglings

After the young leave the nest, the male southern boobook becomes the primary caregiver.
Juvenile southern boobook food-begging after the female has deserted.

follow their parents around from tree to tree, the female defends them; she sometimes gives a single "hoot" call as she swoops past our heads. The single hoot call is like the first half of the two-note call in a cuckoo clock, like the first half of the common boobook call. and adults give it with emphasis. Because southern boobooks in this study used the single hoot call most commonly after their young fledged, we heard it most often in December and January. Females used it first, after the young fledged, then males started to use it when they took over parenting responsibilities after the females "turned off" or left the breeding territory.

Female southern boobooks stop caring for their fledged young in different ways. In one variation, males move with their fledged young to different parts of the territory away from the family's nest and "camp out" during the day. As the male and fledglings move further and further from the nest, the female stays behind because she doesn't feed or defend her young because she is no longer with them - the family has left her. The adult male assumes total responsibility for feeding and defending the fledged young.

Breeding territories for southern boobooks are about half a square mile (1 square km), and these deserting females set up a home range of about the same size on their own, and well before winter sets in. One female roosted in a cluster of three Mediterranean cypresses, all within 33 feet (10 m) of each other along a cul-de-sac - Sydney Avenue near Parliament House in Canberra. The three trees were about 23 feet (7 m) tall and had very dense foliage, so she was invisible to passersby. Her home range included a mix of native and exotic trees and shrubs arrayed across parks, gardens, houses, flats, offices, a school, shops, quiet streets and some main roads. On a typical evening she first moved from deep within the roost tree to the outer branches and peered out; she occasionally preened and sometimes disappeared back into the roost tree, to reappear a short time later. She might fly up to 100 feet (30 m) and perch before starting her foraging flights. On two occasions she did not leave the roost...
The study of owls

A hungry, responsive owl flitting in after an artificial mouse-like lure. Herb Copland kneeling in the snow, must time his net swing precisely in order to catch the occ’l. Robert Nero is a Nivilliz assistant controlling the lure with a fishing rod.

during the three hours that our colleague, Steve Taylor, watched the tree. Sadly, on May 12, 2001, seven years and four months after we banded her at her nest, she was killed on this winter home range by a domestic cat.

Many female raptors around the world migrate to more open places for the winter rather than the wintering grounds used by males of the same species. This could explain why female southern boobook move away from their forest breeding territories and desert their families-to find more open ground that requires less agility for large females to fly in and hunt through, and lessens the risk of fatal accidents. However, this doesn’t explain why some females remain on their breeding territories and simply stop feeding and defending their young. We look forward to spending many more hours watching southern boobooks and other birds of prey to learn more about female desertion.

To catch an owl by

Robot W. Nero

In response to a query as to whether we intend to use our tame shrew to lure great gray owls this winter, I’m undecided.

The shrew could probably stand the strain, and, of course, it’s easy enough to obtain lab mice and other lure animals. But my long-time partner, Herb Copland, and I are now both 80 years old. It’s mostly a matter of deciding whether it’s useful to subject ourselves to the conditions under which we try to capture owls for banding in Manitoba, Canada.

Searching for owls is pleasant enough, even under severe winter conditions, though I can recall a few trying times when we had to be towed out of a snow-filled ditch.

Fortunately, Herb Copland is a most agreeable companion, never scolding and seldom complaining. One late evening, heading home after a long