

# Quest for the Salmon-crested Cockatoo: The Pink Opal of the Moluccas

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The Moluccan or Salmon-Crested Cockatoo is found in the wild only on Seram in the Moluccas of Indonesia, and thus it is increasingly referred to as the Seram Cockatoo. It is extinct on Saparua and Haruku (despite what some books and articles still state) and is likely to be absent on the numerous heavily-logged small islands along the Southeast, East, West and North coasts of Seram. Seram cockatoos have been observed on Ambon to the South as recently as 1995 and Poulsen and Jepson suggest that these might be endemics; others favor their origin as escaped pet birds.

In the Moluccas, Seram is often referred to as "Nusa Ina"—Mother Island—the supposed cradle of Moluccan civilization. It is also a land of mystery, where some feel that headhunters still live deep in pockets of the interior and Alfur tribesmen can make mortals fly through the air or die mysteriously. I have to admit that for almost exactly 5 years, I too have come under the spell of this island.

My dream has been to see the Moluccan Cockatoo (*Cacatua moluccensis*) in the wild, and to verify with my own eyes that it is not extinct. This fate of this beautiful, intelligent, expressive, and charismatic bird has become a passion, almost an obsession, fanned by the inordinate amount of neglect and even abuse heaped upon this bird in captivity by the unprepared or unsympathetic owner. As Rosemary Low points out, it is a singularly sensitive and devoted bird, and in return requires an owner who is singularly sensitive to its needs.

But it was not at all clear to me in 1997 whether or not the cockatoo was extinct. The combined influences of logging (often illegal), which destroys nesting habitat, and trapping for the companion bird trade, had been synergistic in bringing about rapid declines in certain Indonesian cockatoos. Adding to these factors are the slow reproduction, weaning and fledging rates of this "k-selected species."

A search of the then-embryonic World Wide Web yielded virtually nothing of relevance. Even today, the texts of Arndt, Juniper and Parr, and Coates and Bishop, provide only a few paragraphs on the ecology of the Seram cockatoo. Vanishingly little is still known about the biology of this cockatoo in the wild and it took some searching to unearth the few extant articles from the arcane annals of the ornithologic literature. To my knowledge, there are no extant photographs of the Seram cockatoo in the wild until 1996 when Isabel Isherwood and colleagues, leading the Edinburgh Expedition to study the fauna of Seram, took a few pictures which, later, she kindly shared with me.

In desperation, I had written to then-President Soeharto to "use your authority to truly protect the last of these flying jewels." Joop Ave, the Minister of Tourism, replied that "your cogent and impassioned plea for the cockatoo to be saved from extinction so alarmed H.E. the President that he committed the Indonesian government to taking immediate action. [He] therefore instructed the Minister of State for the Environment, the Governor of Maluku Province, the Territorial Military Commander and the local civil authorities on Seram to implement measures for the protection of not only the remaining cockatoos but also their habitat." (April 10, 1997). Unfortunately, such decrees are rarely enforced or enforceable, and Soeharto shortly lost office. On January 27, 1999, the new President Habibie was to sign a presidential decree (No. 7199) to protect both the Moluccan and the yellow-crested (sulphurea) cockatoos. However, his tenure was also short. Meanwhile, although commercial exports of birds from Seram to Ambon were limited by the chaos of civil war in the Moluccas, they were replaced to an unknown degree by their removal by soldiers who considered them oleh-oleh (souvenirs).

Then finally, I recently had the chance to make the long-dreamt trip and see the cockatoo for myself. But first, some additional background information.

My previous connections with Seram were two-fold: First, over the past 3 yr., Project Bird Watch (PBW), of which I had been a member and donor, had initiated a program on Seram to convince the local people (in the villages of Sawai and Masihulan ) that showing the birds to tourists (a sustainable enterprise) was more profitable to them in the long run than the non-sustainable sale of trapped birds (or logging rights, which endangered the nesting and roosting trees of the birds). Secondly, I had helped to fund the first current, fully scientific survey of the Seram cockatoo population on (the Western half of) Seram; this survey was carried out by Margaret Kinnaird and her colleagues of the Wildlife Conservation Society (see below). However, both of these conservation efforts had come to a screeching halt a year later when a bloody civil war between Christians and Muslims, claiming at least 5000 lives, broke out on the neighboring island of Ambon, the site of the closest airport.

Fortunately, Drs. Margaret Kinnaird and Tim O'Brien, of the Wildlife Conservation Society, were able to partially complete a census of cockatoo densities on Seram prior to the outbreak of the civil war, in collaboration with BirdLife International, the Indonesian Ministry of Forestry, and Pattimura University. The census was begun in May of 1998 and involved seven sites, all on the western half of Seram. Two different census techniques (the Line Transect and Variable Circular Plot) were employed; the results using the two methods correlated well, lending credence to the accuracy of the results. The average density by the Line Transect method was 7.9 birds per sq. km. Densities were highest in areas with abundant *Octomeles sumatranus* (a favored nest tree) and strangling figs (a potential source of food).

When these data were analyzed using complex statistical programs, they yielded minimum, conservative estimates of 70-100,000 cockatoos remaining on Seram (a figure which assumes that the still-unaccomplished survey of Eastern Seram would yield similar numbers). Indeed, these figures might have been even higher if the data accrued using

VCP methodology were included. Therefore, Kinnaird suggested that "the Moluccan cockatoos are still widely distributed in lowland habitats [ie, below 650 m.] in the Western portion of Seram."

But how do these numbers compare with those from earlier studies? Surprisingly, the VCP numbers of the current study( 10.3 visually; 18.2 if audio calls are included )are not lower than those accrued by Marsden in 1990 (9.1-9.8 birds/sq.km.). While the two studies are not strictly comparable, it suggests that a major decline in populations has not occurred after 1990 (ie, around the time that the cockatoo was placed on Appendix I of CITES). Note that this does not mean that Seram cockatoos are easily seen on the island; indeed, they are shy , and fly (often just below the canopy) mostly early in the morning and at dusk. In other words, whereas total bird populations on this huge island are still substantial, their densities are low. This distinction is obviously of importance to the eco-tourist who wants to see many cockatoos.

These optimistic findings seem at odds with the fact that there has been an increase in the value of cockatoos to the trappers. The selling price has risen from about \$5 to about \$25 over the past two years, as it becomes harder to find and trap the birds. Statements about the increasing rarity of the cockatoo were made to us on interviews similar to those made to Dr. Kinnaird in her structured interviews. Sixty of 70 of her respondents answered in the affirmative when questioned whether they find that "the cockatoo is becoming rare." However, it is possible that these subjective conclusions relate to a collapse of the wild population only in certain favored hunting spots relatively close to inhabited villages and/or the possibility that these highly intelligent creatures are learning to avoid capture.

All this was the backdrop to our recent voyage to Seram. The purpose of our trip to Indonesia, then, was to try to renew our bond with the people of Seram, as well as to initiate a similar bond with people on islands off the West coast of Papua (also called Irian Jaya—the Indonesian half of Papua New Guinea). Originally, 16 of us had signed up and pre-paid to go. However, the Sept. 11 disaster reduced this to 10. Those of us departing from the U.S. flew to Bali. After an overnight in Bali and a transit overnight in Makassar (on Sulawesi), we flew to Sorong in West Papua and boarded two "pinisi boats" (small schooner-like boats similar to those used by the famous explorer Alfred Wallace in the mid-1800's). While sailing for Seram, the motor of one of the 2 boats cracked. Then we found out that both the ship's radio and the universal phone were inoperative. Finally, a squall blew in, and we were adrift on the open Indian Ocean! Fortunately, we were less than 40 miles from Seram and limped into port the next day. Good fun though!!

We spent about a week there, meeting with villagers and discussing their needs. We had already supplied desks, chairs and books for one of their schools, and medical supplies for their nurse-run clinic. The villagers, in turn, led us by boat up the Salawai River to the jungle entrance where we trekked to camp (sometimes through calf-deep mud and always aware of the indigenous rattan with its tendrils like barbed wire). The next day and several times thereafter, we ascended to the small platforms built by the villagers in the rainforest canopy. To get there meant being hoisted on rope pulleys to heights of 150 ft.

Great fun!! At canopy level, we saw many *Eclectus (roratus)*, lorries (including Moluccan red lorries), rainbow lorikeets, Moluccan King (Amboina) parrots, a few Great-Billed parrots, and many hornbills and giant fruit bats. We instantly became "Canopy Junkies."

We saw about 10 cockatoos. Unfortunately these sightings were not under conditions amenable to photography—since the cockatoos were either distant and/or in flight. However, seeing them and hearing their magnificent array of calls was wonderful. They seemed to rule the forest and, upon landing, proclaim "I am COCKATOO! Hear me now!"

We also had the opportunity to gain novel insights by interviewing Buce Makatita—former head trapper of cockatoos and now chief guide. Among his observations were that Seram cockatoos have 2 clutches (usually of 2 eggs), one in April and one in October. [Note that the limited previous data suggest that the cockatoos nest as early as May or as late as July or August with the young fledging as late as October; therefore, these data require further study]. Usually only one egg survives. [This opens the possibility that the second nestlings could be taken and hand-reared for later release, as has been carried out with the macaws at Tambopata Research Center in Peru.] Natural predators of the cockatoos include monitor lizards, hornbills, and snakes. There is no evidence of unexplained or unusual cockatoo aggression problems or cockatoo plucking or feather disease (or mortality) in the wild. Hens occasionally seem to have "affairs" with non-mate cockbirds, but then they return to their original mates! The cockatoos particularly have fun after a heavy rain, bathing in wet leaves, then breaking off twigs and displaying. (The full interview is published in the Winter, 2002 issue of *Companion Parrot Quarterly*). It will be important to determine their full range of diet but they have been reported to eat coconut pulp, seeds, larvae and grubs, figs, durian or Pandanus fruit, and nuts (presumably those of the kenari tree, now available for purchase in the United States as "MoluccaNuts").

Were our (admittedly short) sightings on Seram compatible with the published data? We saw about 10 cockatoos in about 5 attempts covering perhaps 20 h of observation, or roughly 0.5 cockatoo/h. In 1989, Bowler and Taylor sighted cockatoos 0.3 times/h in lowland forest; in Marsden's studies, encounter rates of 1.0-2.5 birds/h were recorded in lowland forest, but his figures include audio contacts. Thus, our crude findings do not seem to be grossly discordant with published studies and thus do support the conclusion that declines in cockatoo populations might not have been nearly as drastic as feared. However, I should emphasize that we were often observing from the lowland forest canopy, where (as indicated above) the chance of visual sightings may increase.

We then sailed to Gam, a tiny island in the Raja Ampat group of islands off West Papua. There we were treated to sightings of the courtship dance and mating ritual of the Red Birds of Paradise, flocks of up to 15 Triton cockatoos, endless *Eclectus* and lorries, and mobs of hornbills flying overhead. The Tritons alit on branches and played for well over an hour, screeching happily, eating, swinging on branches while flapping, and generally acting irrepressible. We also saw a beautiful pair of Tritons at nest, happily and lovingly preening each other. We saw this array of birds on every hike and also realized that the

flat open areas where we saw them, would be perfect areas for camping out. We decided to name these areas kebun burung-burung (Gardens of the Birds). As if to end on a perfect note, we got two brief glimpses of the Raja Cockatoo (Palm or King Cockatoo) in flight! We ended with unexpectedly emotional good-byes, the promises of the villagers to conserve their avifauna, and our promises to try to help the villagers.

We hope to put together a return trip in 2002, and fund studies into the biology and ecology of this charismatic bird. We need to know about its feeding, nesting and breeding behaviors. Would artificial nestboxes help if the logging continues? What about hand-raising the second nestling? Is the population of cockatoos spotted on Ambon in 1995 still to be found there? Is the Seram cockatoo out of harm's way? Surely not. It is still listed as "vulnerable" in the IUCN Red Book. Logging, wet rice cultivation, and trapping pose continued threats. One hundred thousand birds is not a lot. Indeed nearly 70,000 cockatoos were legally exported between 1983 and 1990.

Many argue that the Seram cockatoo is too sensitive a bird to have ever been taken from the forest. I totally agree. But the damage is done and for all the magic that this bird imparts to us in captivity, we owe it to them to vouchsafe that all of their remaining relatives remain where they belong: safe within the swirling mists and mysteries of "Nusa Ina"—Seram.

Anyone interested in donating to the conservation of parrots on these islands can contact me at [parrotdoc@att.net](mailto:parrotdoc@att.net) The author wishes to thank Dr. Margaret Kinnaird for her insights, and permission to use as-yet unpublished data concerning the Seram census.