

# Recent observations of the critically endangered *Sulphurea* subspecies of Yellow-crested Cockatoo

## Rawa Aopa Watumohai National Park SE Sulawesi, Indonesia

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The Lesser Sulphur-crested (or Yellow-crested) Cockatoo (*Cacatua sulphurea*) is an endangered Indonesian species and one of only five cockatoo species represented on Appendix I of the Convention on International Trade in Endangered Species (CITES). The species is comprised of four generally accepted races (subspecies): *parvula*, *abbotti*, *citronocristata* and *sulphurea*. The latter is endemic only to the Indonesian island of Sulawesi (formerly Celebes). Extant studies suggest that although some small populations may exist elsewhere, the remaining cockatoos are mostly confined to two locations in SE Sulawesi: Rawa Aopa Watumohai National Park (RAWNP) and Buton Island, and a single location in central Sulawesi (Pasoso Island). Of these, RAWNP is clearly the most significant. RAWNP is unique in having 7 ecosystem types, that is: tidal mudflats, mangrove forest, wooded savannas, hill forest, swamp forest, peat swamp and cultivation. In 2000, a team from the Indonesian Forestry Service (PHKA), BirdLife Indonesia, and the NGO YASCITA (Yayasan Cinta Alam-Kendari) team undertook a survey of *C. sulphurea sulphurea* in selected areas of RAWNP and estimated a total population of perhaps 100 individuals or less. The current study, nearly five years later, represents a follow-up to that study, and was designed to gain new information into the status and habits of this highly endangered subspecies of cockatoo.

### Population and nests

The study was conducted starting twice a day, at 5.30 am and 5.00 pm. A total of 37 cockatoos were observed in 7 surveyed locations (28 in forested areas; 9 in cultivated areas), yielding an extraordinarily low average density of 1.3 individual per thousand sq. km., which is much less than even another highly endangered subspecies of *C. sulphurea*, the Citron-crested cockatoo *C.s. citronocristata*. Six apparent cockatoo nest holes were sighted, with at least two seeming to be active. At one, the mated pair could be seen to interact energetically with crests raised at the

nesthole entrance (see photo). The apparent nest holes were located in *Alstonia scholaris* or *Parinarium corimborum* trees and were at heights of approx. 10, 12, 13, 15, 15, and 20 m., respectively.

### Daily activities

In the morning, activities consisted of perching in trees (43% of time observed), eating (12%), playing (22%) and other activities such as moving about (22%), 'sun-bathing' in the tree top, preening and vocalizing. In the afternoon, eating increased to 30%, whereas perching declined to 27%. Playing decreased, but socializing increased from 1 to 9% of time. The cockatoo preferred the middle spatial canopy (mean=61%) followed by using the top spatial canopy (30%) for performing daily activities. These percentages for middle canopy position broke down as follows: socialization, 100%; eating, 51%; moving about, 79%. When eating fruit and young leaves, the cockatoos were situated in the middle and top spatial strata or end



Photo: WPT

The Lesser Sulphur-crested cockatoo is one of the species threatened by deforestation and trapping on Buton.

of branches. Perching at top strata on dry branches predominated during mornings. The middle strata in the canopy seemed to be a 'pleasurable' place where there is protection from predators, sun's rays and hostile climate. They used the bottom strata only for perching and limited movements. The dominant plant species used at the Laea location are Tompira and Bitti (*Vitex coffasus* and *vitex galabra*), Kuiya (*Alstonia scholaris*), Bamboo (*Bamboosa spinosa*), Behi spp, and Soasoarate.

Data on the food preferences of Indonesian cockatoos in the wild are limited. Ten species of tree, bush or plant were observed to provide food for the cockatoo (Table).

Cockatoos also consume the fruit of tall timber trees such as "kayu besi" (*Intsia bijuga*) the source of "ironwood" for building and tangkalase, a deciduous hardwood tree. Thus logging might have adverse effects on cockatoo survival by eliminating food sources and destroying nesting sites, at least in drought years. In fact, non-structured interviews suggested



Photo: Dudi Nandika

Two Lesser Sulphur-crested cockatoos outside their nesthole with crests raised.

No	Local Name	Scientific Name	Part eaten
1	Tompira	<i>Vitex coffasus</i>	Fruit
2	Bitti	<i>Vitex galabra</i>	Fruit
3	Tahuloh	<i>Mallotus floribundus</i>	Young bud leaf
4	Tangkalase	<i>Gmelina asiatica</i>	Fruit
5	Bambu	<i>Bamboosa spinosa</i>	Flower
6	Kayu besi	<i>Intsia bijuga</i>	Fruit
7	Tampate	<i>Lagerstoemia foetida</i>	Seed
8	Soasoarate	-	Fruit
9	Onangki/Kayu raja	-	Fruit
10	Kuiya	<i>Alstonia scholaris</i>	Young leaf

that it was easier to see these rare birds in the dry season when cockatoo food was more limited and they were likely to frequent cultivated areas.

Other foods likely eaten, as observed by others and summarized, include: fruits/seeds of maize (*Zea mays*); banana (*Musa*); mango (*Mangifera indica*); papaya (*Carica papaya*); fig (*Ficus*); guava (*Psidium guajava*); jambu bol (*Eugenia malaccensis*); "kedondong batu"; "marang taipa"; prickly pear (*Opuntia elation*); srikaya (*Annona squamosa*); flowers of coconut (*Cocos nucifer*); tamarind (*Tamarindus indica*); flowers and fruit of the mangrove (*Avicennia*); fruit of marangtaipa (*Dehaasia*) and young leaves of Sonneratia; and "ninifo", thought to be a *Canarium*.

Cockatoo were seen to interact with several non-psittacine species: *Coracias temminckii*, (a purple-winged roller, which invaded a cockatoo nest hole, leading to competitive fighting); *Aplonis panayensis* (a Philippine glossy starling, which was seen to chase a cockatoo); and *Spilornis rufipectus* (a Sulawesi serpent-eagle, which also was observed chasing a cockatoo).

## Concluding remarks

It is likely that at most only a few hundred individuals of the nominate race of *C. sulphurea* survive in the wild on Sulawesi; the breeding population might be only one-third to one-half as large. Once common enough to be considered an agricultural pest, it was one of most available of the world's cockatoos in the marketplace.

Although no attempt was made to reproduce the 2001 study for the sake of making precise analyses of population trends, it is clear that the number of birds at this, its most populous remaining site, is very low and possibly declining. Continued trapping, plus habitat limitation, now threaten it with extinction and the race is described as "potentially beyond recovery" in the Parrot Action Plan. It would be a tremendous shame if the world gave up on this beautiful cockatoo referred to in Indonesia as "*kakatur kecil jambul-kuning*"-- the little cockatoo with the yellow crest.

## Acknowledgements

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# WPT-USA moves to Florida!

As all our USA members are well aware, Joanna Eckles has been ably managing this large portion of the Trust for going on seven years now! Having now thoroughly rebuilt and developed this branch - which frequently trades places with the UK as the Trust's largest - Joanna decided it was time to hand the baton over to someone new.



As luck would have it, our own Glenn Reynolds - long time Trust supporter, founder and manager of the Golden Conure Fund and until recently a World Parrot Trust Trustee has decided that he'd like to take on the many and varied responsibilities for the WPT-USA. Glenn just returned from a fast and furious few days of training in (frigid!) Minnesota to get up to speed as the new WPT administrator.

Joanna will be wearing a new set of hats for us at the Trust, working on a variety of communications tasks including writing and editing work on *PsittaScene*, communicating with members, donors, and branches, and giving presentations on the Trust at various parrot gatherings. She will also continue to work with our partners in the Zoo and Veterinary communities. I know we're always asking for your patience, but at least for the next month, if you can please bear with us while this transition is taking place, things should be back to normal - or hopefully better than normal with both Glenn and Joanna up and running - quite soon.



*Joanna (with helper Torianna) and Glenn got unexpected assistance from Rollx President Mike Harris in the move to Florida. Rollx is a Minnesota company that converts vans for the handicapped. They carried all of our (WPT USA) equipment and supplies free of charge in a van being transported to Florida. Their contribution saved the Trust considerable money and time which we'd much rather spend on Parrots than on FedEx!*

**Thank you Rollx Vans**