References

Becking, J.H. 1976. Feeding range of Abbott's Booby *Sula abbotti* at the coast of Java. *Ibis* 118:589-590.

Cadee, G.C 1985. Some data on seabird abundance in Indonesian waters. July/August 1984. *Ardea* 73:183-188.

Cadee, G.C. 1987. Seabirds in the Banda Sea in February/March 1985. *Marine Research in Indonesia* 27:19-34.

Carter, M. 1994. Birds of Australia's Christmas Island. Wingspan 13:18-21.

Collar, N.J., M.J. Crosby & A.J. Stattersfield. 1994, *Birds to watch 2. The world list of threatened birds*. BirdLife Conservation Series 4.

Harrison, P. 1983. Seabirds. An identification guide. Helm, London.

del Hoyo, J., A. Elliott and J, Sargatal (eds). 1992. *Handbook of the birds of the World*. Lynx Editions, Barcelona.

Smeenk, C. 1985. Whales and sea birds. In: Progress Report Snellius Expedition. Theme II Ventilation ofdeap sea basins, cruise MV Tyro, January 4 - February 6 1985. (H. Postma and J. Rommets eds) KNAW/LIPI; 6-10, 24-26.

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ANTING BEHAVIOUR IN BALI STARLINGS by S. (Bas) van Balen

(First draft received 18 October 1995)

The Bali Starling *Leucopsar rothschildi* (or Rothschild's Mynah; Sturnidae, Aves) is a critically endangered bird endemic to the island of Bali (Indonesia), with just 35-40 birds surviving in the wild, all in Bali Barat National Park (Collar *el at* 1994) Very little has been published about the behaviour and ecology of wild birds, but some data are available about its behaviour in captivity (e.g. Sieber 1983). The Bali Starling conservation programme (Indonesian Forestry Ministry, BirdLife International -Indonesia Programme, American Zoo and Aquarium Association) in which the author was involved during 1989-1994, provided opportunities to study the species further.

The Bali Starlings under observation comprised 15-25 wild birds, and a group of 13 (12 of which

had been captive-bred) released into the Bali Barat National Park in phases between 15 and 21 April 1990 (van Balen & Gepak 1994). The observations were made during the first weeks of an exceptionally harsh dry season, immediately following the starling's breeding season (November-April). All standing water had already dried-up and the birds were dependent on drinking water provided by the Project officers.

At 17.10hrs, 22 April 1990, three wild Bali Starlings (one adult and two young) and four of the recently released captive-bred adults were perched in a Pilang tree Acacia leucophloea at a height of about 5-6m above ground. For several minutes these birds were engaged in what appeared to be active anting. They were quickly picking up small ants from the bark with their bills, and these were rubbed with fast, almost rythmic preening movements under the wings, tail and on the breast Anting has not previously been reported for Bali Starlings, either captive or wild. However, Bali starlings eating ants has been anecdotally reported by forest wardens and bird keepers, and may actually refer to anting behaviour. The active use of ants by birds as described above is known for only 200-250 bird species, mostly passerine, of which the main purpose is maintenance of the feathers. In the Northern Hemisphere most anting observations have been made during postbreeding periods and juvenile moult, and may be correlated with weather and seasonal factors producing maximum activity of ants (K.E.L. Simmons in Campbell & Lack 1985). Indeed, in western Indonesia, a peak abundance in insects occurs at the end of or immediately following the rainy season (Koningsberger 1915; Voous 1950; Fogden 1972); the posi-rainy season in Bali is April-May (Sandy 1987). Swarming of ants is most likely to take place then. Moreover, as standing water is not available in the dry season, the starlings resort to dusting (pers. obs.) and apparently anting as described above.

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References

Balen, S. van, & Gepak, V.H. 1994. The captive breeding and conservation programme of the BaliStarling (*Leucopsar rothschildi*). In: *Creative Conservation* (Ed. by P.J.S. Oiney, G.M. Mace & A.T.C. Feistner), pp. 420-430. London:

Chapman & Hall. Campbell, B. & Lack, E. (eds). 1985. A dictionary of birds. Calton: Poyser.

Collar, N.J., Crosby, M.J. & Stattersfield, A.J. 1994. Birds to watch 2. The -world list oftrealemd birds. BirdLife Cons. Series 4.

Fogden, M.P.L. 1972. The seasonally and population dynamics of equatorial forest birds in Sarawak. *Ibis*, 114: 307-343.

Koningsberger, J.C. 1915. Java, zoologisch and hiologisch. Buitenzorg.

Sandy, I M. 1987. Iklim Regional Indonesia. Dept of Geography, Uni. of Indonesia, Jakarta. Sieber, J. 1983. Nestbau, Brut und Jungenaufzucht beim Bali-star (Leucopsar rothchildi). Zool. Garlen N.F., Jem. 3/5, 281-289.