

GENERAL NOTES

Ecology of the Budgerygah.—With reference to the paper by Cade and Dybas (*Auk*, 79: 345-364, 1962) on the water economy of the Budgerygah (*Melopsittacus undulatus*) under laboratory conditions, it may be of interest to add a few field observations from central Australia. In the wild, this little parrot does not prosper under drought conditions. In the very dry period from August, 1960, to September, 1961, Mrs. Rothwell was active in the field in the Alice Springs area, Northern Territory, but saw only one Budgerygah (and that apparently an escaped bird), despite the fact that in the vicinity of certain properties within settled areas water would be available at all times from troughs or drains at stock-watering wells.

In September of 1961 flocks of up to 1,000 Budgerygahs appeared near Alice Springs. Shortly thereafter the drought was broken and they became widespread throughout central Australia. Apparently under favorable conditions they breed more or less continuously the year around. The species remained numerous for at least a year. On 4 and 5 August 1962 the Rothwells and Amadon, on a trip to the Harts Range, about 100 miles northeast of Alice Springs, found the Budgerygah to be the most numerous bird, with the possible exception of the Zebra Finch (*Poephila castanotis*). The desert was green and in full bloom.

Not long thereafter, on 3 October, there was a tremendous mass exodus to the eastward, which probably involved millions of Budgerygahs. Every two or three hundred yards for a distance of 50 miles the sky was covered with great skeins of birds. The flight continued after dark, the first time Mrs. Rothwell has known this species to fly at night. At this time surface water was beginning to dry up. Grey Teal (*Anas gibberifrons*) had left the lagoon at Central Mt. Wedge, northwest of Alice Springs, a week earlier, also flying east, while 400 Pelicans (*Pelecanus conspicillatus*) left Lake Nash west of Mt. Isa on October 11. All of these birds were believed to be moving into areas in eastern Queensland where there was more rainfall. Nevertheless, two weeks later an inch and a half of rain fell in the Alice Springs area.

The water-conserving abilities of the Budgerygah, as noted by Cade and Dybas, probably permit this small bird to range over a considerable area of dry country each day without drinking more than once or possibly twice. The species follows the unpredictable rains in the interior of Australia and, like the Flock Pigeon (*Histrionophaps histrionica*) and some other desert species that require drinking water, is subject to tremendous fluctuations in abundance. When unable to find any area that has had sufficient rain the Budgerygah is probably subject to mass decimations or catastrophes.

This is certainly true when excessive heat accompanies the drought. Under such conditions the parakeets sometimes become so heat crazed that they crowd or settle recklessly into ponds and are drowned by the thousands. In his *Budgerigars in bush and aviary* published in 1933 the late N. W. Cayley described at length (pages 24-35) the mass destruction of Budgerygahs and other birds by a terrific heat wave that gripped the interior of Australia in 1932. Daytime temperatures in the shade ran about 110-125°F for days on end. Thirty thousand drowned Budgerygahs were removed from one stock tank alone. Under such extreme conditions even such birds as crows and hawks were decimated, along with several species of parrots and various small birds. Further observations of the water requirements of Australian desert birds are needed.

For a photograph of a huge concentration of Budgerygahs at an Australian water-hole see *Audubon Magazine*, 1942, p. 295.—MRS. RAY ROTHWELL, P.O. Box 206, Wollongong, N.S.W., Australia, and DEAN AMADON, *The American Museum of Natural History*, New York 24, New York.