LITERATURE REVIEW

Sightability as a factor in aerial survey of bird species and communities. Broome, L. S. (1985). *Aust. Wildl. Res.* 12: 57-67.

Experimental aerial and ground censuses of waterbirds were conducted on three small, isolated bodies of water on the New England tablelands of New South Wales. The flying height at which sightability was optimized for the most common species was 30 m.

Density and distribution of Emus. Grice, D., Caughley, G. and Short, J. (1985). *Aust. Wildl. Res.* 12: 69-73.

Data obtained from aerial surveys show that Emus are most abundant in areas used for extensive sheep grazing. Their density is lower in grain-growing areas, lower still in areas used for extensive cattle grazing, and lowest in those areas that are not used for any commercial purpose (mainly deserts).

Damage to cultivated fruit by parrots in the south of Western Australia. Long, J. L. (1985). *Aust. Wildl. Res.* 12: 75-80.

Damage to fruit crops in six orchards in the south-west of Western Australia by the Red-capped Parrot *Purpureicephalus spurius*, Western Rosella *Platycercus icterotis*, Port Lincoln Parrot *Barnardius zonarius*, and White-tailed Black Cockatoo *Calyptorhynchus funereus baudinii* was investigated. In any one fruit season no single orchard suffered losses greater than 1.4% of the total fruits grown.

Breeding biology, diet and morphometrics of the King Shag, *Phalacrocorax albiventer purpurascens*, at Macquarie Island. Brothers, N. P. (1985). *Aust. Wildl. Res.* 12: 81-94.

This paper discusses the results of a study which extended over five breeding seasons.

Natal dispersal in House Sparrows: possible causes and consequences. Fleischer, R. C., Lowther, P. E. and Johnston, R. F. (1984). *J. Field Ornithol.* 55: 444-456.

This paper examines some of the causes and possible consequences of the dispersal of House Sparrows banded as nestlings. The study was undertaken on seven farms (each having its own colony of House Sparrows) within a study area of about 12 km^2 in eastern Kansas, USA. The longest distance over which a House Sparrow dispersed in this study was about 2.2 km.

Criteria for determining age and sex of nestling Bald Eagles. Bortolotti, G. R. (1984). *J. Field Ornithol.* 55: 467-481.

The author monitored the development of 64 nestling Bald Eagles in Saskatchewan, Canada. He measured up to 11 variables on the chicks every 6-7 days until they were about 60 days old. Twenty of the birds were also measured shortly after they had fledged. Using known-age birds, a formula was derived to age nestlings 0-26 days old to an accuracy of ±3 days using the chord of their culmen. From 24-72 days old the growth of the eighth primary feather was highly linear and was used to predict the age of nestlings to ±3 days. Strongly bimodal distributions of all size variables suggested a sexual dimorphism. The sexes could best be discriminated by depth of bill and length of foot pad. Sexual dimorphism in size was distinct at about 20-24 days old for foot pad. The techniques described in this paper could have application to ageing and sexing nestling raptors in Australia.

Evaluation of leg bands for visual identification of free-living Silver Gulls. Ottway, J. R. Carrick, R. and Murray, M. D. (1984). *J. Field Ornithol.* 55: 287-308.

In 1970, Carrick and Murray (*Aust. Bird Bander* 8(3): 51-56) described a new type of numbered aluminium band designed to enable the identification of free-living birds without them having to be recaptured. During 1967-1970, these bands, together with colour bands on the other legs, were placed on 17 410 Silver Gulls in South Australia. On free-living gulls the numbered bands had a maximum readable life of about 10 years and the colour bands had a readable life of about 3-4 years. The results of this study indicate the enormous potential for studies using readable bands, with returns far exceeding those from convential bands. The nature and frequency of the errors detected from the use of these bands are discussed. Less than .2% of records were rejected as a consequence of unresolved errors.

Reproductive periodicity in a population of Crested Terns, *Sterna bergii* Lichtenstein, in south-western Australia. Dunlop, J. N. (1985). *Aust. Wildl. Res.* 12: 95-102.

Crested Terns breeding in the Fremantle area nest over an 8 month period from early April to early November. However, laying is markedly bimodal, with subseasons in autumn (April) and spring (September). Individuals tended to lay in the same part of the season as in the previous year. Colonies made up of terns with similarly phased reproductive cycles formed at different times within the protracted laying period. Observations of individually marked breeding Crested Terns indicated a sedentary population utilizing a number of alternative, traditional colony sites.

The Peregrine Falcon (*Falco peregrinus macropus*) Swainson in south-eastern Queensland. Czechura, G. V. (1984). *Raptor Research* 18: 81-91.

Information for this review was obtained from Queensland Museum records, literature, and previously unpublished observations which were made by the author and others. The review provides details about the breeding distribution of the Peregrine Falcon in south-eastern Queensland. It also provides information about the date of breeding, clutch size, hunting behaviour, prey species, and interactions of Peregrine Falcons with other raptors.

Assesment of nasal marker materials and designs used on dabbling ducks. Lokemoen, J. T. and Sharp, D. E. (1985). *Wildl. Soc. Bull.* 13: 53-56.

Nasal markers are frequently used on ducks. This paper assesses the retention, observability, and pattern discrimination of the following types of nasal markers which, during a 6-year study, had been attached to 1 076 dabbling ducks of three species: i) saddles made from PVC of various 2-colour combinations, some of which had been inscribed with black alpha-numeric symbols; ii) saddles made from lynply of various colours on which white symbols had been etched; and iii) shapes cut from nylon of various colours. The lynply saddles had the highest loss rate; the PVC saddles had the next highest loss rate; and the nylon markers had the lowest loss rate. Several PVC saddles changed colour or faded during the course of the study. Information is also provided on the ability of observers to identify colours, symbols and shapes using different optical aids. It was concluded that the most suitable nasal marker for the species tested was the nylon shapes.

Weight changes and the mode of depot fat accumulation in migratory Short-tailed Shearwaters. Lill, A. and Baldwin, J. (1983). *Aust. J. Zool.* 31: 891-902.

The time course of fat deposition in breeding adults, immatures and chicks was determined by monitoring weight changes at the breeding site, and the relative importance of *de novo* fatty acid synthesis and direct incorporation of fatty acids from the diet was assessed by assaying enzymes associated with hepatic lipogenesis. Extensive fat deposition occurred only in the chicks during development, and all age classes deserted the breeding colony with relatively small reserves of depot fat.

The use of time and energy by the Crimson Rosella in a temperate wet forest in winter. Magrath, R. and Lill, A. (1983). *Aust. J. Zool.* 31: 903-912.

The diet, time- energy budget and density of a population of Crimson Rosellas were compared in autumn and winter to determine why the energetic stresses of winter were not reflected in a high investment of time in feeding and reduced investment in nesting.

The extinct Kangaroo Island Emu, a hitherto unrecognised species. Parker, S. A. (1984). *Bull. Brit. Ornithol. Club* 104: 19-22.

A description of *Dromaius baudinianus* sp. nov.

Observations on the Mallee Fowl *Leipoa ocellata* in Australia. Immelmann, K. and Bohner, J. (1984). *J. Ornithol.* 125: 141-155. (In German with English summary).

Field and aviary observations of the behaviour of Mallee Fowls were made in South Australia from 12 February 1982 through to 10 April 1982.

The acceptance of dyed grain by feral pigs and birds. I Birds. Bryant, H., Hone, J. and Nicholls, P. (1984). *Aust. Wildl. Res.* 11: 509-516.

Experiments showed that colouring agents depressed the acceptance of wheat, maize and sorghum by several species of Australian birds.

A scale for weighing birds at habitual perches. Poole, A. and Shoukimas, J. (1982). *J. Field Ornithol.* 53: 409-414.

A general note describing the construction and discussing the success of an electronic perch-scale at Osprey nests.

Sex determination of adult Whimbrels. Skeel, M. A. (1982). *J. Field Ornithol.* 53: 414-416.

A short note describing discriminant function analysis scores for the field sexing of live caught Whimbrels.

A technique for live-trapping cormorants. Foster, M. S. and Fitzgerald, L. A. (1982). *J. Field Ornithol.* 53: 422-423.

Noose-snares set on a mesh base suspended 15-30 cm below the surface of the water, in locations where cormorants passed to leave the water after feeding, were successful in snaring cormorants' feet. Captured birds were removed from the trap immediately and no birds suffered injury from the trapping.

Another mist net variation. Trichka, C. J. and Varza, D. (1982). *N. Am Bird Bander* 7: 16-17.

Describes the construction of pole sets using electrical conduit of ½" and ¾" diameter electrical conduit. The small diameter section fits into the larger for ease of transport. A hose clamp is used when the poles are extended to prevent the top section of pole slipping into the larger diameter tubing.

A case for storage and transportation of mist net poles. Parker, J. W. (1982). *N. Am Bird Bander* 7: 24.

Describes the use of lengths of 4" PVC sewerage pipe for the housing and transportation of electrical conduit net poles.

Relative effectiveness of trapping-banding vs. visual observation in a winter bird population study. Tweit, R. C. and Tweit, J. C. (1982). *N. Am Bird Bander* 7: 150-151.

The effectiveness of a visual-aural censusing method is compared to the results of trapping — banding to determine the numbers of two common resident species.

Observation variability in estimating numbers: an experiment. Erwin, R. M. (1982). *J. Field Ornithol.* 53: 159-167.

Examines the effects of observer differences, prior experience, training and numerical magnitude on accuracy in estimating numbers of birds from photographs.

A mist-net technique for use with low bridges and deep water. Barrentine C. D. (1984). *N. Am. Bird Bander* 9: 11-12.

Describes the construction of a mist net to be lowered from a bridge over deep water to catch swallows passing under the bridge.

A mist net technique useful for capturing Barred Owls. Elody, B. I. and Sloan, N. F. (1984). *N. Am. Bird Bander* 9: 13-14.

Describes and discusses the success of various techniques used to capture 39 Barred Owls. The most successful method used three mist nets erected in an "A" shape. A live decoy owl was placed within the "A" and a sound recording of the owl's call was played.