

Review

HANDBOOK OF AUSTRALIAN, NEW ZEALAND & ANTARCTIC BIRDS (HANZAB). VOLUME 1, PART A, RATITES TO PETRELS; PART B, PELICANS TO DUCKS

Marchant, S. & Higgins, P.J. (Coordinators) 1990. Melbourne: Royal Australasian Ornithologists Union & Oxford University Press. 1400 pp. Numerous figures, sonograms, tables, maps and colour plates. Price \$AUD 395.00. ISBN 0-19-553068-3.

To all those interested in marine ornithology, publication of HANZAB is a very significant project. The completed work will cover almost 50% of the world's seabirds in great detail. Many of these species have a tropical distribution in both hemispheres and many others are migrants either to or from the northern hemisphere so the publication should attract attention throughout the world. For those whose ornithological interests lie in Australasia or in the higher latitudes of the southern hemisphere, the work is an essential reference.

Since HANZAB comes from the same publishing house as the 'Birds of the Western Palearctic' it is not surprising that the format of HANZAB is very similar. Thankfully, the birds are listed in the familiar Wetmore order so everything is where you might expect to find it. In 'The taxonomy & species of birds of Australia & its Territories' by Christidis & Boles, published by the RAOU in December 1994, the new *de facto* official Australian 'Checklist', the more modern sequence, proposed by Sibley & Ahlquist (1990) in their 'Phylogeny and classification of birds: a study in molecular evolution', has been adopted in part. Not so for HANZAB which was commenced well before the new order was generally accepted. Seabird groups included in Volume 1 are the penguins (Spheniscidae), albatrosses (Diomedidae), petrels and shearwaters (Procellariidae), storm petrels (Hydrobatidae, the synonym Oceanitidae is also used), diving petrels (Pelecanoididae), pelicans (Pelecanidae), gannets and boobies (Sulidae), darters (Anhingidae), cormorants (Phalacrocoracidae), frigatebirds (Fregatidae) and tropicbirds (Phaethonidae). A map on the endpaper indicates the area embraced by the work, which is about 18.5% of the whole world. All of the Antarctic region below 60°S, 225° of arc below

45°S, as well as New Zealand, the whole of Australia (i.e. to 10°S), its territories and surrounding seas, are included: this area is home to about 10% of all avian species. Volume 2 of this seven-volume HANZAB project has already been published but includes no seabirds unless sheathbills are considered to be marine animals. Volume 3, which includes the phalaropes (Scolopacidae), and the skuas, gulls and terns (Laridae), is due for publication in early 1996.

Comprehension of the precise region covered by HANZAB is made easier if one labels the latitudinal and longitudinal lines on the maps, as this is not done for you. This is one of a few features of HANZAB which is not immediately user-friendly. I suggest that when you buy these books, your first task should be to make them more friendly just by making a few simple additions. Firstly, using a thick, permanent, instant-drying pen, label the spine and face of the dust cover with a bold **A** or **B** as appropriate to avoid picking up the wrong 'Part' of this two-book volume on every second occasion. This will save much time and obscene language if, like me, you often refer to them. Unfortunately, the publishers chose a small and obscure 'print' to distinguish the two parts. Next, use a similar pen but with a fine point, to label properly the plates. Otherwise you will forever be jumping between the plate, the numbered monochrome reproduction of the plate and the caption, to identify the image of your desire. Thank goodness this strategy of plate numbering was dropped for the second volume (third book). This task is made even more necessary because the numbering on the plate is random and the caption is sometimes located in reverse position, e.g. Gould's and Stejneger's Petrels *Pterodroma leucoptera* and *P. longirostris*. This is in contrast to the text which does read conventionally from left to right and from top to bottom! Another problem is that the plate captions do not give page numbers for the relevant text.

The 'Introduction' for the whole work is in Part A. This is a users' guide, giving general background information, glossaries of terms and definitions, and a summary of the sort of information one may expect to obtain from major headings in the species texts. There are a few short-comings with this section. Unfortunately the print size used for some subheadings is the same as for the major headings making quick reference difficult. I suggest that you qualify repeated subheadings yourself. For

instance, after 'GLOSSARY' add 'Habitat' or 'Plumage' as relevant to save time when you flick back in search of a definition. Not that you will always satisfactorily find your definition anyway. For instance the 'glossary' for 'Plumage and Related Matters' defines 'ramus' only as part of a feather as shown in Fig. 21, omitting the other definition as one half of the lower mandible where it is divided at its base as shown in Fig. 13. Incidentally, some abbreviations are also undefined. Luckily I know that NZDOC means New Zealand Department of Conservation and I guess OED (under Emu e.g.), means Oxford English Dictionary but we are not told. Having once had a boss who enjoyed talking in abbreviations just to imply superior familiarity with his subject, I am not fond of this practice.

I found difficulty with Table 1, which ostensibly defines the nomenclature for plumages and moult, when trying to reconcile it with the terms used in the text. The terms defined here seem to have been largely abandoned. Moreover this table doesn't seem to admit two plumages within one year. That is, there may be a first-immature non-breeding-(season)-plumage as well as a first-immature breeding-(season)-plumage and so on (I am informed that the section defining plumages and moult will be revised and clarified in Volume 3). Here too, in the table, many of us will be introduced to an unfamiliar feather tract: the humerals and their associated coverts. This is an important innovation because birds like albatrosses gain extra length in the wings by having a long humerus which therefore supports more feathers. What I'm not clear about is how a bird can have subhumeral without having humeral, as indicated in Fig. 5 for the Fluttering Shearwater *Puffinus gavia* (which looks more like a Hutton's Shearwater *P. huttoni*)? Maybe the figure is incomplete? Certainly Fig. 3, which shows feather tracts on the dorsal surface of a Latham's Snipe *Gallinago hardwickii* is incomplete. This figure shows in great detail the primaries and secondaries but completely omits the tertials which are very important feathers in this species, as in most Charadriiformes.

There are occasional taxonomic departures from previous publications and some of these are without explanation or justification. For instance, the Whitetailed Tropicbird *Phaethon lepturus* is regarded as monotypic whereas Peters' Checklist of the birds of the world, and other authorities, properly consider the golden form on Christmas Island to be of the race *fulvus*. Some flippancy in taxonomic opinion is also demonstrated by the recognition of Macaroni and Royal Penguins *Eudyptes chrysolophus* and *E. schlegeli* as separate species. Just

four years on, the new Australian 'Checklist' has lumped them. This is just as well as there is now no need to resolve the contradictions of the identity of vagrants. We are told identification must be based on locality, not morphology, Royals occurring only at Macquarie Island. Yet vagrant records of Royal Penguins are given for several other localities! Another change of thought since HANZAB has been the lumping of several island forms of cormorants and, for some, even a change of genera. Macquarie and Heard Cormorants *Phalacrocorax purpurascens* and *P. nivalis* are now, elsewhere, considered to be part of the Imperial Cormorant *Leucocarbo atriceps* complex.

The species texts are normally subdivided into the following major subjects. Field Identification, Habitat, Distribution and Population, Movements, Food, Social Organization, Social Behaviour, Voice, Breeding, Plumages, Moults, Measurements, Weight, Structure, Geographical Variation and References. A section headed Recognition is added where identification may be a problem. General data on the Family are given under that title preceding the species texts. The quantity of information presented is immense. We are told what is known about a bird, what may be known and what is not known. Only a few things are incorrectly stated. There are, however, just a few subjects, such as longevity, diseases, causes of death, etc., which are hardly mentioned – perhaps indicating the real lack of such data.

Some subject matter is provided under unsuitable headings. Notes on general behaviour are tucked away in the final paragraph of the sub-heading 'Similar Species' under 'Field Identification' and descriptions of mechanically-produced sounds, such as bill claps, are given under 'Voice'. Occasionally one finds subject matter apparently transposed. For example, under 'Habitat' one reads that Cook's Petrel *Pterodroma cookii* is 'endangered', information I expected to find under 'Population'. Some sections of text have even been transported from another species. For instance, under Pycroft's Petrel *P. pycrofti* we read that its behaviour at sea is assumed to be similar to '... Pycroft's Petrel'!

We can be very thankful that the senior co-ordinator did not get his published wish and 'let us get our art-work elsewhere'. Sanity prevailed, so every species is illustrated with at least two images. Where necessary, multiple images are provided. Jeff Davies' plates are original in style, extremely informative, generally accurate as well as pleasing. They are an essential part of the project complementing the 'Field Identification' and 'Plumage' elements of the text. All are portrayed in the most reveal-

ing postures to aid field identification. Thus the Procellariiformes are shown in flight and in most plumage phases. Many are the best representations presently available but there are inaccuracies. For instance subtle, and not-so-subtle, differences which enable Short-tailed and Sooty Shearwaters *Puffinus tenuirostris* and *P. griseus* to be identified and separated at sea are not properly depicted. The necks of both species are drawn fractionally too long, the wings too broad and the tails much too tapered. The Sooty Shearwater is illustrated with equal projections of the body fore and aft of the wings instead of about 3/8 before and 5/8 after. It has less of a cruciform shape than Short-tailed Shearwater. In flight, the Short-tailed Shearwater has more like half the length of the toes trailing behind the tail rather than just the claws as drawn. The Sooty Shearwater has a more attenuated wing point which is neither portrayed nor mentioned under 'Field Identification'.

Text writers and the artist usually co-operate well and share material so there should not be a dichotomy of opinion. However, as mentioned above, both the Short-tailed and Sooty Shearwaters are illustrated with a wedge-shaped tail whereas in both 'Field Identification' and 'Structure', their tails are described as rounded. This may be true, but at sea they do usually appear slightly cuneate. Another instance is in differences in the underwing pattern of Stejneger's and Gould's Petrels. The text states that the mainly white underwing of Stejneger's distinguishes it from Gould's, but the plate shows it with only marginally less black.

The authors of the various sections have incorporated the results of many of their own previously unpublished work and have been bold, and in my opinion, generally very sensible, in accepting unreviewed and unpublished information provided pers. comm. and *in litt*. This was necessary due to the rapid accumulation of radically new information, especially about seabirds, over the period immediately before publication. Thus HANZAB is more than a collation of published literature. Much original work and information gleaned from photographs is included in addition to the traditional museum studies of skins and literature review although there is some contradiction in the acceptance of some data. For instance, under Softplumaged Petrel *Pterodroma mollis*, data taken from some of my photographs of birds off the Victorian and New South Wales coasts are presented as fact under Plumages and Moults, whereas under Distribution and Population the occurrences are claimed to be 'unconfirmed'! The information provided on that great seabird phenomenon, the 'Wreck', receives only scant mention and I could find no mention at all of the occur-

rence of such disasters for the Common Diving Petrel *Pelecanoides urinatrix*, in spite of published data from New Zealand and Australia.

My one great personal disappointment is with the HANZAB treatment of prion *Pachyptila* spp. morphology and distinguishing features. Both the plates and text are at fault and are not consistent. All prions are drawn with a T-shaped undertail pattern which may be nearly correct only for some Antarctic Prions *P. desolata*. Typical Slenderbilled Prions *P. belcheri*, at least those occurring in Australia, have a very long central streak, longer than drawn, with no cross bar at the tip. Fairy Prions *P. turtur* have no central streak at all (only the tips of the longest coverts are black), but the black across the tip is broader and darker. Salvin's Prions *P. salvini* typically have a black triangle at the centre of the tip of the undertail and are often barred on the lateral undertail coverts. Strong barring is indicative, possibly diagnostic, of this species. Antarctic Prions are rather variable but typically the tail pattern is like a T with the stem narrowest at its base and broadest at the cross-bar which extends almost to the outer tail feathers. The head and neck patterns are also improperly drawn, thus masking actual distinctions. The illustration of the Slenderbilled Prion does not show the half collar which differentiates it from Fairy Prion shown on the same plate. Some of these errors could have been avoided if Carter, M.J. (1981) Undertail patterns of prions, *Australasian Seabird Group Newsletter* 15:9–10 had been consulted. The paper was written in 1978 and distributed among my friends and colleagues. Since then I have seen thousands of prions at sea, taken many photographs of live and dead birds, and I stand by the statements in that paper. The distinctive long central streak up the undertail of the Slenderbilled Prion, first described therein, has found expression in HANZAB, if only in the text, but no credit is accorded to the source.

At last we have a publication where we can find detailed information on measurements, mass and structure. Until HANZAB, data on these subjects for many exclusively southern seabirds was very hard to obtain. I no longer retain some beach-cast specimens in my freezer for the purpose of obtaining this previously scarce material. The references provide an extremely useful bibliography for one's own research and are testimony to the exhaustive literature search performed. There are nearly 150 citations for the Wandering Albatross *Diomedea exulans* alone.

My appreciation of HANZAB was enhanced recently when at sea with a group of seabird enthusiasts we

encountered two non-typical *Fregetta* storm petrels in an extralimital location. The local field guides and other seabird identification books were inadequate to solve the problem of identification but reference to HANZAB resolved the matter immediately.

This publication is expensive but its purchase will eliminate the need for other books as most accumulated knowledge is synthesised herein. Members of the RAOU in Australia can purchase this volume (two

books) for A\$335.00 plus \$7.50 for postage, and since the current subscription rate is only \$40.00, buying this way is an overall saving and you also enjoy the other benefits of membership which includes the excellent quarterly magazine *Wingspan*. Elsewhere, potential purchasers should inquire locally because postage from Australia can be exorbitant.

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