

Bird Notes

Ravens in the Adelaide region

ANDREW BLACK, PHILIPPA HORTON,
LYNN PEDLER AND GRAHAM
CARPENTER

INTRODUCTION

The taxonomy of Australian corvids genus *Corvus* had an unsettled early history and, before the late 1960s when Rowley (1969) published his studies of lamb predation by Australian 'crows', only three species were recognised: the Torresian Crow, *Corvus orru*, Little Crow, *C. bennetti*, and Australian Raven, *C. coronoides*. During the conduct of that wide-ranging investigation Rowley established that both the Little Raven, *Corvus mellori*, and the Forest Raven, *C. tasmanicus*, were distinct from the Australian Raven and separate species (Rowley 1967, 1970).

All five corvids occur in South Australia. The Torresian Crow is chiefly found in the far north-west and the Forest Raven in the south-east. The desert-adapted Little Crow occurs widely across the arid zone, in the mallee and occasionally more widely; while the Little Raven generally occurs in agricultural regions. The Australian Raven is the corvid of the Flinders Ranges and the north-east, extending into the Murray Mallee, Eyre Peninsula and coastal areas, including the Coorong, lower Yorke Peninsula and Kangaroo Island (SAOA 2008).

Apart from occasional records of the Little Crow (South Australian Museum egg clutch B26460, Wild Horse Plains, M. Waterman 1957;

skin B23221, Middleton, F. E. Parsons 1927) the only corvid reliably reported from the Adelaide Plains, southern Mount Lofty Ranges and Fleurieu Peninsula is the Little Raven, yet claims of the Australian Raven in this region are frequent, e.g. Szabo *et al.* (2011). While that particular report was quickly acknowledged as an error (J. Szabo and H. Possingham pers. comm. to AB), maps from the BirdLife Australia Atlas database (www.birddata.com.au) continue to show reports of Australian Ravens across much of the area under discussion.

METHODS

In attempting to assess distributional limits for the Australian Raven closest to Adelaide we have referred to museum specimen data and to published and unpublished reports with suitable supportive evidence (see **Identification** below).

FINDINGS AND DISCUSSION

Records of the Australian Raven

The South Australian Museum contains 12 skins collected as Australian Ravens from the Adelaide Plains and Southern Mount Lofty Ranges between 1909 and 1966 but all are Little Ravens, as are all collected in the area since that time. The nine clutches of 'Australian Raven' eggs taken from this area between 1888 and 1959 are also likely to be those of the Little Raven; three collected by R. F. Brown from Dry Creek and Torrens Island mangroves in 1935 and 1936 were taken with nestlings that developed into adults typical of the latter species (pers. comm. to AB). Eggs of the two species are indistinguishable (Rowley 1970, personal observations of authors) and so the remainder and some clutches taken from where the two species are allopatric cannot be identified with

certainty. The closest localities to the east for identifiable Australian Raven skin specimens are from Sutherlands east of Eudunda (B45534, E. Boehm) and Malinong east of Meningie (B31694, 39740, J. Eckert). To the north the nearest localities are from mangroves c. 5 km north-east of Port Pirie (B29420, J. B. Cox and S. A. Parker), c. 10 km south of Quorn (B46335, 46678, B. J. St John) and c. 3 km south-west of Mannahill (B32957, J. Truran).

Eckert (2000) accepted only a single record of the Australian Raven in the Strathalbyn District (east to Wellington and north to Monarto Conservation Park), a pair identified by its high, wailing call at his own property Nappyalla south-east of Langhorne Creek in 1973. He observed that the species was resident east of Meningie and (to the north) at Blanchetown. Cox (1973) found the Australian Raven to be present but less common than the Little Raven in the Mannum area and reported having examined two dead specimens of the species. Acceptable records in both Adelaide Region Atlases (SAOA 1977, 1994) are from the mallee belt north of Mannum, east from around Cambrai, Sedan and Sutherlands. A few records from the Adelaide Plains were shown in each Atlas and in the first, also from around the head of Gulf St Vincent. Observations by several observers over many years of only Little Ravens in the area raise doubt about their validity. In the second atlas records were shown south-west of Murray Bridge towards Langhorne Creek but the basis for these is also uncertain since reliable reports from Murray Bridge are very infrequent and only Little Ravens have been recorded during many years of observations at Monarto.

There are reliable records of the Australian Raven from mangroves near Port Broughton and from the Southern Flinders Ranges, e.g. Wilmington, Melrose, Wirrabara Forest, Nelshaby and Beetaloo but not south of Crystal Brook. The species is also present near Hammond, Mookra, Orroroo, Black Rock Conservation Park, between Peterborough

and Oodlawirra and east of the North Mount Lofty Ranges, e.g. Pandappa Conservation Park, Ketchowla, Red Banks Conservation Park, Hopkins Creek Conservation Park and near Robertstown. Exceptionally the typical calls of the Australian Raven have been recognised by two observers once each in over 30 years of observations near Koolunga. The species is apparently absent from much of Yorke Peninsula but is present on the 'foot', particularly on and near the coast.

Identification

Field identification of corvids (as in this review) is achieved with experience most reliably by voice but best only when a range of calls is heard because there is much variation and therefore overlap (Debus 1984). The Australian Raven's call is highly characteristic, high-pitched ('tenor') and often concludes with a long descending wail. All corvids, including the Little Raven, will give an occasional concluding wail but it is generally briefer (Higgins, Peter and Cowling 2006). The Little Raven's call is deeper ('baritone') (Debus *loc. cit.*), more guttural and more rapid, with repetition interval generally about one half second, compared with the Australian's interval of about a full second (observations of authors).

Throat hackles, contrary to impressions gained from some field guides, are present in all Australian corvids and are well developed in all adult ravens (Rowley 1970). In the Little Raven they can be quite prominent when calling and this is a frequent cause for its misidentification as an Australian Raven. The latter's hackles are generally longer and shaggier and may flop around while the bird is foraging but the presence of obvious hackles is not diagnostic of that species (Higgins, Peter and Cowling 2006). One character will distinguish the Australian Raven from other adult corvids: an extensive area of bare skin between the shafts of the lower bill (the inter-ramal area) that extends back to the sides of the chin (Rowley 1970). While not necessarily easily seen in the field the feature

can be well appreciated in specimens such as recent road kills.

For a comprehensive review of points of identification of Australian corvids readers are referred to HANZAB (Higgins, Peter and Cowling 2006, pp. 691-695, but note that the inter-ramal area shown on p. 742 is of the Little, not Australian Raven, J. Matthew pers. comm.).

Habitats and early records

Higgins, Peter and Cowling (2006) showed that both the Australian (pp. 695-696) and Little Ravens (pp. 730-731) occupy a variety of natural and modified open habitats, especially 'edge habitats' where open farmland abuts wooded areas. They suggested that, where both species occur together, the Little Raven is more common in open farmland and the Australian in more wooded areas. They recognised only the latter from mangroves but we show that Little Ravens occupy and have bred in the mangroves of St Vincent Gulf. Out of the breeding season breeding and non-breeding Little Ravens form large flocks and may forage in places devoid of suitable nesting trees. Flocks of non-breeding Australian Ravens also occur but breeding pairs occupy stable territories throughout the year. Luck, Possingham and Paton (1999) showed in a study of edge effect in the Murray Mallee that the Little Raven is an 'open country' species that rarely penetrates beyond 200 m into well vegetated mallee patches. The Australian Raven was also recorded but not listed among species assessed for their responses to edge effect, presumably because records of the species were too few for statistical analysis.

The Little Raven is thus well adapted to the changed landscapes resulting from clearance of eucalypt woodlands and mallee for agriculture but whether it has expanded to the disadvantage and displacement of the Australian Raven is not clear. Rowley (1970) observed that the distribution of the Australian Raven closely approximated (in eastern

Australia) the area occupied by sheep and that it was likely to have benefited from the abundant carrion as well as pastures well suited for its foraging. In the area covered by this review the Little Raven is shown to occupy cropping country (and the length of the Mount Lofty Ranges) while the Australian Raven is found in the peripheral pastoral lands (and the Flinders Ranges) and some coastal areas; both species can occupy mangroves.

A decline in corvids occurred on the Adelaide Plains in the later years of the nineteenth century and early years of the twentieth. Crompton (1915) commented on 35 years of observations at Stonyfell and reported that the "Australian raven used to come in immense flocks, especially in summer. They are rarely seen now, and only in small companies." In discussing the general decline in birds at the reed-beds of the lower Torrens since settlement White (1919) wrote that the "Southern Raven had once been plentiful, visiting the district in great numbers; rarely seen now." These observations of immense visiting flocks, rather than of territorial breeding pairs suggest that the Little Raven may have been the common corvid of the Adelaide Plains since settlement.

CONCLUSION

This review concludes that most corvids within the Mid North, Mount Lofty Ranges, Adelaide Plains and much of the Yorke Peninsula regions as defined by SAOA (2008) are likely to be Little Ravens. The Australian Raven is generally found outside these regions or at the periphery. The virtual absence of Australian Ravens from such an extensive area is remarkable but non-breeding Australian Ravens are capable of movements of hundreds of kilometres (Rowley 1970) and so exceptional visits can occur over time; careful documentation is necessary and specimens are desirable although adequate photographs and/or audio-recording may allow recognition of such movements or changes of range.

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Andrew Black and Philippa Horton
South Australian Museum
North Terrace
Adelaide, South Australia 5000
abblack@bigpond.com
philippa.horton@samuseum.sa.gov.au

Lynn Pedler
P.O. Box 58
Koolunga, South Australia 5464

Graham Carpenter
24 Dryden Road
Black Forest, South Australia 5035