

below you), then a descent through villages on the hillside above the Ue River, if anything an even more impressive torrent than the Ibele, and with forest on the opposite bank most of the way back to Wamena.

We stopped for three days in the moss forest zone at 3000m, but had heavy rain the whole time. Hiked from here down to Palililo in a single day through fabulous forest with tons of birds of paradise, such as 20 *astropias* (including 6 males). Worth about a week, I think. Not so Palililo village itself – most of the birds the villagers claimed were present failed to materialize, and it was difficult to sleep because of the fleas.

Birds in the Ue valley moss forest, above 2,900m: Chestnut Forest-Rail (1, with several heard), Dusky Woodcock (one flying over every dawn and dusk), Plum-faced Lorikeet, Greater Sooty-Owl (heard), Orange-billed Lorikeet, Glossy Swiftlet, Mountain Kingfisher (heard), Island Thrush, Friendly Fantail, Dimorphic Fantail (1), Black-breasted Boatbill, Alpine Robin (~10), White-winged Robin, Canary Flycatcher, Rufous-naped Whistler (heard), Lorentz's Whistler (9), Orange-crowned Fairywren (1 group), Mountain Mouse-Warbler, Papuan Scrubwren, Papuan Thornbill (~10), Brown-breasted Gerygone, Black Sitella (1 group), Tit Berrypecker, Crested Berrypecker, Red-collared Myzomela, Black-backed Honeyeater, Belford's Melidectes, Smoky Honeyeater, Mountain Peltops (2), Crested Bird-of-Paradise (1 female + 1 juvenile at about 3050m), Macgregor's Bird-of-Paradise (2 by the camp at 3000m), Splendid *Astrapia* (4, including 2 males), Lesser Melampitta (1 proving it can fly – or at least flutter – plus a few heard), Mountain Firetail (1)

Birds in the forest below 2,900m (1 day): Great Cuckoo-Dove, White-breasted Fruit-Dove, Papuan Lorikeet, Plum-faced Lorikeet, Yellow-billed Lorikeet, Modest Tiger-Parrot, Friendly Fantail (~30), Dimorphic Fantail (~10), Black-breasted Boatbill (~8), Canary Flycatcher, Black-throated Robin (1), Blue-grey Robin, Ashy Robin (heard), Rufous-naped Whistler (1 plus several heard), Golden Whistler (1 male), Lorentz's Whistler (3), Mountain Mouse-Warbler, Buff-faced Scrubwren, Papuan Scrubwren (~30), Black Sitella (~10 in 1 group), Red-collared Myzomela, Belford's Melidectes, Smoky Honeyeater, Great Woodswallow (4 at Palililo), MacGregor's Bird-of-Paradise (4, down to 2800m), Splendid *Astrapia* (20, including 6 males), King-of-Saxony Bird-of-Paradise (1 female), Brown Sicklebill (1 male)

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Notes on Imitator Sparrowhawk *Accipiter imitator* and Pied Goshawk *Accipiter albogularis* on Bougainville

By Don Hadden

There is much to learn about these two little-known goshawks. Debus (1995) concluded his comments with the observation that there is a 'clear need' to understand the plumage, vocalisations, ecology, biology and field identification of these two species. Here I endeavour to add a little to our knowledge of these species and I also comment on the *Accipiter albogularis/imitator* debate based on a series of more recent observations of

these two species on Isabel (Webb 1992, 1997); (Debus 1995); (LeCroy *et al* 2001); (Kratter *et al* 2001) and Bougainville (Hadden pers. obs.)

Habitat:

Although only three *A. imitator* have been positively identified on Bougainville, it appears that *A. albogularis* and *A. imitator* are found in different habitats. Schodde (1977) took his specimen 'within the substage of tall old secondary rain forest' at an altitude of c.300m in southern Bougainville. Our two birds were netted at c.800m and c.1000m inside undisturbed forest in the Crown Prince Range of central Bougainville. *A. imitator* therefore appears to be a bird of the forest interior.

On the other hand *A. albogularis* on Bougainville is a bird of open country, scrubby second growth, airports, playing fields, forest edges, garden edges and even within townships and villages. Schodde (1977) also reported 'fringes and lower stages of forest remnants, open secondary growth and garden areas ... in trees on the edges of clearings and gardens.' Other observers on Bougainville describe similar locations.

Virtue (1947) observed 'a male perched on overhead telephone lines beside a road ... the eye orange coloured.' Bluff and Skyrme (1994) mention a bird out in the open on the Jaba River delta. Brian Finch (unpublished field notes) 'Three birds seen, one in Arawa, one on the Buin road and one at Aropa swamp.' Elsewhere (Blaber 1990) describes it as a bird of 'shorelines ... open areas' e.g. 'on the ground at Munda airfield in July.'

I had some 19 sightings of the species over 8 years in Arawa, and they basically conform to the habitat preferences as described above. Two entries shed some light on hunting and food preferences:

12 June: One young bird, almost in adult plumage, on mown grass beside a shop in Arawa town. It half walked/ran here and there across the lawn until it disturbed a large grasshopper. As the grasshopper flew up into the air the *A. albogularis* with remarkable agility leapt sideways and caught the grasshopper in flight with its talons. It flew to a small low bush about two metres from the concrete block wall of the shop. It was just starting to eat its prey when another *A. albogularis* flew past. The perched bird followed it and they flew out of my sight across town towards the market.

22 August: One flew under Munau's house in Section 11 in Arawa and captured a recently hatched chicken. Mrs Munau was not amused.

I have had many villagers tell me of chicks captured by a black and white 'hawk.' See also Sibley (1951) for similar behaviour on New Georgia. From the above it can be seen that the habitat of *A. albogularis* is across a wide range of open country areas particularly along the coastal lowlands and at times might even be regarded as a suburban bird. The only author I can find who suggests *A. albogularis* is a forest bird is Diamond (1975) who states '*A. albogularis* occurs more commonly at higher elevations (up to at least 1800m) and in the forest and feeds mainly on birds ...'

A. imitator is the bird of the forest interior and clearly forages close to the ground on occasions at least, enabling us to mist net two which would not have been possible if it was a canopy bird. This agrees with LeCroy *et al* (2001) 'Both our specimens of *A. imitator* were collected low in the forest.' Wattel (1973) also speculates that *A. imitator* is a bird of forest interiors 'from the very short wings it may be guessed it is a bird of dense forests.' At this stage of our knowledge of this species on Bougainville, Wattel's guess is

accurate.

On Choiseul and Isabel, the species is only known from a handful of specimens, mostly recently by LeCroy *et al* (2001). G. Dutson (in litt. 2008) saw an *A. imitator* perched low in dense secondary forest at Garana, Isabel. *A. imitator* occurs at much lower population densities and appears to be less conspicuous than *A. albogularis* - even when accounting for its denser forest habitat. Dutson has no records of *A. imitator* soaring, whereas *A. albogularis* are often recorded soaring (including over extensive tracts of closed forest).

Field Identification

In LeCroy *et al* (2001) attention is drawn to the difficulty of distinguishing the pied morphs of *A. imitator* from *A. albogularis* in the field. 'Our collection of both a melanistic and a pied specimen of *A. imitator* has convinced us that the presence of *A. albogularis* on Isabel can be confirmed with certainty only by specimens' and 'we call attention to the difficulties of sight identification.' I am puzzled by these statements as I believe field identification is not a significant problem. The main points are summarized below:

Readily distinguished by iris colour. The two *A. imitator* we netted had very dark eyes, which would appear black in the field, but in good light in the hand are dark brown. On the other hand, *A. albogularis* have golden/yellow/orange/reddish iris colour. This feature alone makes field identification simple. I can find no reports of any of the morphs of *A. albogularis* having black/dark brown eyes. The iris colour of *A. albogularis* is variable but not to the extent that it could ever be confused with the dark iris of *A. imitator*. In fact the dark brown iris of *A. imitator* has been reported from the very first collections (Rothschild and Hartert 1905) although in that paper their Choiseul specimen (No A. 1105) went unrecognised as a separate species despite its having a black throat and breast and dark brown iris. Any apparent difficulty would apply only to fully pied birds.

A pied bird that has a black throat or upper breast is always *A. imitator* as there are no known black-throated morphs of *A. albogularis* (though if there were, one would only need to check iris colour). Other distinguishing features are the jet black plumage of *A. imitator* as opposed to the slaty black and dark grey plumages of *A. albogularis*, but in uncertain light these features may not be easily distinguished.

The two *A. imitator* we netted had the orange-yellow of the cere extending onto the lower mandible. This seemingly does not occur on *A. albogularis*. This feature should be easily discerned on a perched bird especially if a spotting scope is used, though the iris colour would be more obvious.

Another feature of *A. albogularis* and not of *A. imitator* is the rufous collar on the hind neck. In Ferguson-Lees (2001) under the Imitator Sparrowhawk entry and the subheading Confusion Species, he states 'Greatest risk of confusion would be between adults of white-chested morph of *imitator* and collarless morph of Pied Goshawk.' Precisely. Any *A. albogularis/imitator* seen with a collar is undoubtedly *albogularis*. LeCroy *et al* (2001) state 'our collection of both a melanistic and a pied specimen of *A. imitator* has convinced us that the presence on Isabel of *A. albogularis* can be confirmed with certainty only with specimens.'

It is puzzling therefore to find Webb, a co-author of (LeCroy *et al* 2001) stating in

an earlier paper (Webb 1992) '*A. albogularis* has a rufous dorsal collar and white underparts. I often saw it soaring above valleys between Bara and Kologaru villages.' Clearly Webb observed *A. albogularis* on Isabel during his two years there from September 1986-1988 because he writes of the rufous dorsal collar. G. Dutson (in litt. 2008) has also seen *A. albogularis* on Isabel, identified by their distinctive size, grey upperparts and rufous collar.

There seems to be confusion about the adult male pied *Accipiter imitator*. Doughty (1999) states under *Accipiter imitator* 'Sexes alike except in size, female larger ...' LeCroy *et al* (2001) 'In pied adults of *A. imitator* of both sexes ...' However I cannot find any reference in any paper to a pied male specimen. I believe the pied adult male plumage was unknown at the time Doughty and Le Croy were writing. However, the specimen we collected on Bougainville was a male bird (Le Croy pers. comm). This bird had an undescribed plumage variation. The white underparts were washed throughout, from lower breast to undertail coverts with an ashy, earthy colour. The second bird was similarly coloured. Both birds were pied morphs with dark throats and upper breasts. The first bird was netted in dense forest at *c* 1000m in the Crown Prince Range of central Bougainville on 20 May 2000.

Description: Bill black. Large broad yellow-orange cere, this colour extending onto the lower mandible. Upperparts black. Throat and chin black. Breast grey, some feathers with darker edges. Lower breast, abdomen and undertail coverts as above. Undertail light brown, no barring. Underwing largely white. Under the primaries light grey with grey barring but at the tips of the primaries it is plain grey with no barring. Legs orange, claws black. Iris black but in good light is seen to be a very dark brown. Wing 186mm, bill 16.9mm, tarsus 55mm and tail 151mm. Overall length 300mm.

A second *A. imitator* was netted on 10 June 2001 at *c.* 800m in the Crown Prince Range, central Bougainville. Bill black, cere orange the colour extending onto the lower mandible. Upperparts and throat black. Breast black but not as jet black as the throat. Rest of underparts basally white but washed throughout with an ashy, earthy, dirty colour right through including the undertail coverts. Patches on thigh dark grey. Underwing similar to the first bird. Legs and feet orange. Claws black. Iris very dark brown. Hooded eyelid. Wing 203.2mm, bill 18.1mm, tarsus 63.2mm, tail 169.7mm. Total length despite the long tail 300mm.

This *A. imitator* was caught by hand. When my field assistant John Turuora checked this net, he found as he approached quietly that the *A. imitator* was standing on the ground eating a Stephan's Dove *Chalcophaps stephani* that had walked into the net. John ran towards the *A. imitator* which flew but then hit the net. At that point he was able to capture it. On examining the Stephan's Dove it was found to be intact except for the back of the skull which had been opened up and all the brains had been eaten. This was photographed.

Unfortunately this expedition ended with some difficulty. The Bougainville Revolutionary Army personnel who still control a large area of central Bougainville came to the village and took all my mist nets, my cameras, tape recorder etc. Although we knew we were in a restricted area it was at the invitation of the village chief. Until things settle down politically the area where these birds were discovered will remain off limits to all visiting ornithologists.

One other *Accipiter* has been netted. John Turuora collected a black morph *A. albogularis* at 1500m in the Crown Prince Range. Apart from its size its golden yellow iris confirmed its identity as *A. albogularis*. All black above and below. The breast had some feathers edged dark grey. In the centre of the abdomen there were just two or three rufous feathers. Underwing coverts grey, some feathers darker tipped while the primaries had narrow, dark grey barring although each 'bar' only covered half of each feather. Bill black, cere lemon, hood of skin over eye and eyering also lemon. Legs greyish-mustard. Feet mustard. Iris yellow or golden. Wing 232mm, bill 19.4mm, tarsus 63mm, tail 179.7mm. Total length 370mm.

This specimen *A. albogularis* differs from the black morph *A. imitator* described in LeCroy *et al* (2001) as follows: It was considerably larger. Measurements of *A. imitator* from Isabel were: Wing 195mm, tail 159mm and tarsus 57mm. The measurements of the Bougainville specimen were: Wing 232mm, tail 179.7mm and tarsus 63mm. The Bougainville bird had a yellow iris not chestnut brown. It was black not glossy black. The cere was lemon not yellowish-orange. The legs and feet were greyish mustard not pale orange. It is clear then that even the black morphs of *A. imitator* and *A. albogularis* are easily distinguished in the field by iris colour. In my field notes I have several references to the yellow iris of the black morph *A. albogularis* seen elsewhere on Bougainville. The larger size may not always be apparent as size is notoriously difficult to estimate in the field.

The *A. imitator* seen in the field on Isabel by G. Dutson was a pied morph with white underparts with a rufous streaky wash on the breast. *A. albogularis* never show rufous-washed underparts.

Calls: A rufous-naped individual was recorded at Kieta on the evening of 16 September 2001. It gave sets of seven calls at about two and a half notes per second. Another adult gave a continuous series of 'kek kek kek' calls, 38 in total at two per second. These standard accipitrine calls seem to be consistent across the range. A juvenile in May 2001 was calling regularly with short pauses and was perhaps begging or advertising its presence to the adults. Twenty-two bursts of calling, ranged from nine to thirty-one notes each time and were given at five notes a second, about twice as rapid as an adult.

Nesting

The only nesting activity I observed was that noted above. In the centre of Arawa township are several gigantic fig trees *Ficus* sp. A pair of *A. albogularis*, one dark morph and one pied morph built a nest in a relatively slender leafy branch at almost the highest point in the tree. At this great height 'c. 40m' the branch it was built in was lying almost parallel with the ground but others near it were more vertical. On 29 April while I watched for half an hour the dark morph bird was seen bringing small and medium sized sticks to the nest. These sticks were collected from other *Ficus* sp trees nearby. It spent a few moments each time apparently working the sticks into the nest but leaves prevented a clear view. On 3 May the pied *A. albogularis* was seen soaring and circling above the nest tree at 1230 hours. On 4 May the black morph bird was calling persistently from the nest. The nest was now substantially larger and a sitting bird could no longer be seen. It wasn't until it flew off the nest that I saw it was the dark morph bird that had been calling. As it was the one spending time on the nest it was presumably the female. It flew to an adjacent tree and continued calling. Throughout May there was little activity at the

nest and I presumed the adults were incubating. On 3 June the nest was gone. Webb (1997) also reports that they build bulky nests and that the black morph was the female.

The BirdLife Species factsheet for *A. imitator* classes the species as Vulnerable. I suspect that it will be found to be reasonably common in the forest interior throughout Bougainville because we netted two despite very few net hours. Also Schodde took one about 100 kilometres south of our area. Very little work has been done on the high altitude birds of Bougainville and to obtain three *A. imitator* would seem to suggest it will be found fairly readily by future ornithologists.

BirdLife Factsheet summary:

Justification This little-known species is classified here as Vulnerable on the basis of very small island subpopulations which are inferred to be declining through forest loss. However, it has been seen so infrequently that any population estimates are largely conjecture, and it may qualify for Endangered (or even Critically Endangered) status.

Range & population *Accipiter imitator* is endemic to Bougainville, **Papua New Guinea**, and Choiseul and Santa Isabel, **Solomon Islands**. It is rare but may be overlooked because of its unobtrusive forest habits and it perhaps lacks a distinctive call. It is known from just one specimen from Bougainville and a handful from both Choiseul and Isabel. During many weeks of fieldwork on all three islands in the 1980s and 1990s, it was seen only once on Bougainville and a series of records from Tirotonga village on Isabel. One specimen was taken here, but some of the other field records and local reports, including those of all-black individuals, have been queried. This species's similarity to the polymorphic sympatric *A. albogularis* has led to a number of uncertain records, including birds on the distant island of Makira. Population numbers and trends are difficult to assess from so few recent records, but the species is clearly very rare and appears to have declined, on Choiseul at least.

Threats As a lowland species, it is likely to be threatened by forest loss and degradation. There is extensive logging in the lowlands and hills of Choiseul and some on Isabel. Logging may become a problem on Bougainville when the island opens up to development. It possibly suffers from competition with *A. albogularis*, especially in degraded forest.

Recommended citation BirdLife International (2007) Species factsheet: *Accipiter imitator*. Downloaded from <http://www.birdlife.org>

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