

Picathartes—another West African forest relict
with probable Asian affinities

by Storrs L. Olson

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Sibley (1973) has reviewed the history of classification of *Picathartes*, a distinctive passerine genus consisting of 2 well-differentiated species, *P. oreas* and *P. gymnocephalus*, confined to the primary forests of western Africa. On the basis of additional egg-white protein data he reaffirmed his own previous conclusions (Sibley 1970), as well as those of Amadon (1943) and Delacour & Amadon (1951), that *Picathartes* belongs in the large and ill-defined family Timaliidae and not with the Corvidae or Sturnidae as had sometimes been suggested previously. Accepting this, the problem remains of determining the nearest relative of *Picathartes* within the Timaliidae.

Although he made note of Serle's (1952) observation that *Picathartes* bears a resemblance to the southeast Asian and Indonesian species *Eupetes macrocerus*, Sibley (1973: 24) considered that this similarity was "almost certainly the result of convergence". Serle evidently had little confidence in his own insight and maintained that *Picathartes* was nevertheless probably related to the Corvidae. The egg-white protein data prompted Sibley (1973) to propose a particularly close relationship between *Picathartes* and the African timaliid *Turdoides*. It would seem that such a conclusion was influenced by zoogeographic considerations and the fact that the only genera of Timaliidae analyzed by Sibley were *Turdoides*, *Trichastoma* and *Pomatostomus*—a sample which must be deemed inadequate for a proper assessment of relationships within this complex and quite possibly unnatural group of birds. (One may note in addition, that Sibley's egg-white protein results have recently been questioned on purely methodological grounds—Brush 1979.)

I believe that Serle was probably more correct than he realized in proposing a relationship between *Picathartes* and *Eupetes*. Currently placed in the genus *Eupetes* are the New Guinean species sometimes recognized as constituting a separate genus, *Ptilorrhoa*; for the present comparisons, however, I shall consider only *Eupetes macrocerus*, which is larger and more closely resembles *Picathartes* than do the New Guinean birds. *Eupetes macrocerus* and *Picathartes* have in common a similar build; long, strong tarsi; a long, well-developed tail; lax, decomposed plumage; and a long, slender neck. As in *Picathartes*, part of the head pattern in *Eupetes macrocerus* consists of bare skin, although this is a more restricted patch which extends along the sides of the neck. The long, slender bill of *Eupetes macrocerus* is more closely approximated by that of *Picathartes oreas* than by *P. gymnocephala*, and the pattern of the short, black velutinous feathers of the lores and cheeks of *E. macrocerus* is similar to the pattern of the dark portions of bare skin on the head of *P. oreas*. Both *Eupetes macrocerus* and the 2 species of *Picathartes* are terrestrial birds of primary forest and are noted for their speed and agility on the forest floor. This contrasts markedly with *Turdoides*, which is an arboreal, shrub-dwelling bird of more arid upland savannas. Furthermore, there is absolutely no resemblance in external appearance between *Turdoides* and *Picathartes*. *Turdoides* lacks any bare areas on the head or neck, the bill shape is different,

Sula leucogaster was present and nesting in large numbers on both islets; eggs, and naked and downy young were seen. Approximately 100 adults were estimated to be present on Behangovo and some 250 on Betalinjona. On Betalinjona adults were also seen roosting on narrow ledges under the large overhang on the northern aspect of the islet, together with some 50 Common Noddy *Anous stolidus*. The nearest reported population of *Sula leucogaster* is on the Iles Glorieuses, but this has apparently become extinct in recent years (Benson *et al.* 1975).

Both *Fregata ariel* and *F. minor* were present on the islets. A single large frigate was seen in the morning over Behangovo, but large numbers were observed gathering over the islet in the evening. Males of both *F. ariel* and *F. minor* were sighted at Betalinjona, and the numbers gathering over the rock in the evening were estimated at over 100 individuals; no young were seen and none of the males showed obvious gular sacs.

The other conspicuous sea-bird at the rocks was *Phaethon lepturus*. There were 3 sightings at Behangovo, and at least one nest was occupied there at that time. At Betalinjona there were several sightings of flying birds, and there were nests present on the steep southern side of the islet. These records represent the first definite account of *Sula leucogaster* and of a large roosting population of *Fregata* spp. in coastal waters of Madagascar; *Phaethon lepturus* and *Anous stolidus* have been reported previously to nest in the region (Milon *et al.* 1973).

A few land-birds were also present on these islets. There were c. 30 sightings of *Foudia madagascariensis*. A single youngish individual of *Dicrurus forficatus* was seen on Betalinjona, and at least 2 individuals of *Cisticola cherina* were present at Behangovo. Two individual *Dryolimnas cuvieri* were seen at Betalinjona, a dry rocky and sparsely vegetated habitat which does not seem to be typical of this species elsewhere in the region (Milon *et al.* 1973, Benson *et al.* 1976). Two individuals, evidently a pair, of the common *Falco newtoni* were observed on Behangovo.

Sula leucogaster has probably survived on Behangovo and Betalinjona because of the inaccessibility of these islets, but other factors, such as local taboos which are known to have existed on islands to the South until recent times (L. A. Mauge, pers. comm.) could have been important.

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the tarsi and tail are proportionately shorter, and there is no similarity between them in either plumage texture or pattern. The plumage pattern in both *Picathartes* and *Eupetes* consists of areas of uniform colouration without squamation or streaks as in most species of *Turdoides*.

The fact that the ranges of *Picathartes* and *Eupetes* are widely separated in west Africa and southeast Asia, respectively, in no way militates against a presumption of relationship between these genera. Elsewhere (Olson 1973), I have pointed out several diverse groups of birds and mammals that show similar patterns of distribution. Some of the more striking examples among birds are as follows (African forms listed first in each pair): *Tigriornis*—*Zonotrichia*, *Afrapavo*—*Pavo*, *Sarothrura*—*Rallidula*, *Phodilus prigoginei*—*P. badius*, *Verrauxia*—*Sasia*, *Pseudocalyptomena*—Asian broadbills, *Pseudochelidon eurystomina*—*P. sirintarae*. These discontinuous patterns probably have their origins in Quaternary environmental deterioration of formerly forested areas between Africa and southeast Asia. It probably has not been often enough emphasized that many of the endemic elements of the West African forest fauna are relicts of once more generally distributed Old World groups, related survivors of which often persist in Southeast Asia as well.

Although there seems to be no reason to contradict the placement of *Picathartes* in the Timaliidae, the suggestion that it is closely related to *Turdoides* is here considered unlikely. A closer relationship of *Picathartes* to *Eupetes* seems more reasonable on morphological grounds and is in accord with zoogeographic patterns observed in other avian taxa. This, of course, remains to be substantiated by detailed anatomical and behavioural studies, knowledge of *Eupetes* being particularly deficient because the genus has evidently excited less admiration and interest than has *Picathartes*.

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IN BRIEF

Allopreening by the Yellow-casqued Hornbill *Ceratogymna elata*

Hornbills inhabiting the canopy of closed tropical forest are difficult to observe. As a result, almost nothing is known of hornbill courtship behaviour or pair relations prior to actual nesting activity. On the morning of 3 February 1979, I observed allopreening by a female Yellow-casqued Hornbill *Ceratogymna elata* of a male in primary rain forest bordering Lac Tissongo in the Reserve de Fauna de Douala-Edéa, c. 35 km SW of Edéa, Cameroun. I had been observing visitors to a fruiting vine of *Ficus* sp., and at least one pair of *C. elata* was among the regular visitors. At 0820, a pair landed in the crown of the 25 m tall leguminous tree supporting the *Ficus* vine, perching about 2 m from one another. Each began to self-preen, attending primarily to wing and breast feathers. After less than one minute of self-preening, the female approached the male and began to preen him while he continued to self-preen. The male bent his head forward, spreading the nape feathers. The female preened the spread feathers for 15 sec. Then, each bird self-preened for 30 sec. The male continued to self-preen as the female preened the side of his head nearest to her, then preened body coverts beneath the anterior edge of the male's wing on her near side. The male raised this wing slightly, and the female continued to preen beneath the male's wing for 30 sec. This was followed by 60 sec of self-preening by each bird, immediately after which both birds flew, the female following the male in flight. Males leading the females in flight of pairs of *C. elata* was commonly seen by Allen (1930).

Little has been published describing courtship or presumed courtship behaviour in hornbills. Ranger (1951) included comments on pre-copulatory behaviour of the Crowned Hornbill *Tockus alboterminatus australis*, but did not mention allopreening. To my knowledge, nothing has been published on courtship behaviour of *C. elata*. Frequent sightings by myself and R. B. Payne of at least one pair (probably several pairs), but of no larger groups, of *C. elata* at Lac Tissongo from 28 January to 7 February 1979 suggest an early phase of breeding activity at that time. Mackworth-Praed & Grant (1970) note no records of breeding, nests, or eggs for *C. elata*, although they state that breeding probably occurs from December to April.

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