

The nondifferentiated foliage organ which bears ♂ and ♀ reproductive organs, and continues to act as an assimilating organ, being thus at the same time green and fertile, may be considered to represent one of the possible forms of the ancestral organs of grasses.

From the data presented the following conclusions may be drawn, which confirm the theories of Bower, MacDougal, and Dufrenoy:

Organs of grasses were at first all fertile but most of them became sterile under the pressure of ecologic factors. The vegetative activity overshadowed the reproductive activity and most organs become assimilating organs, viz., leaves. A few remained fertile, and responded in diverse ways to their reproductive specialization, attaining their greatest differentiation in ordinary maize.

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ORNITHOLOGY.—*Diagnosis of a new pycnonotine family of Passeriformes*. HARRY C. OBERHOLSER, Biological Survey.

It requires but a superficial examination to discover that the genus *Irena* is out of place among the Pycnonotidae. Apparently it has been referred to that family because of its conspicuous nuchal hairs, which are so characteristic a feature of the bulbuls; and because of the lack of a better place.

That this disposition has not been considered satisfactory is evidenced by Dr. R. B. Sharpe's reference of *Irena* to the Dicru-ridae,¹ which action was, however, soon, and properly, repudiated by Dr. Sharpe himself.² As a matter of fact, the fairy bluebirds, as the members of the genus *Irena* are called, with their metallic

¹ Cat. Birds Brit. Mus., **3**: 265. 1877.

² Cat. Birds Brit. Mus., **6**: 174. 1881.

plumage and heavily plumed nostrils, do, at first glance, very much resemble the drongos (family Dicururidae); but the possession of twelve instead of ten rectrices definitely excludes them from that group. Since, as above indicated, the birds now comprised in the genus *Irena* Horsfield are not properly referable to the Pycnonotidae or to any other recognized family, it becomes necessary to create for them a new group, to be called

IRENIDAE, fam. nov.

Diagnosis.—Readily differentiated from the Pycnonotidae by the strongly corvine bill and the densely and entirely feathered nostrils and nasal fossae.

Family characters.—Bill thick and heavy, but somewhat compressed, the culmen rather sharply ridged, the gonys rounded; terminal portion of maxillar tomia notched; mental apex opposite anterior end of nasal fossae; nostrils small and subrounded, situated in the anterior end of nasal fossae, and entirely and thickly covered with closely appressed antrorse feathers and bristles; head completely feathered; nuchal hairs present and of moderate length; tail of twelve stiffish feathers, slightly rounded, and making up nearly half the total length of bird; wings rather long and rounded; tertials short; first (outermost) primary spurious, but more than one-half the length of second; feet rather small, the claws moderately developed; tarsi short, scutellate, but sometimes rather indistinctly so.

Type genus.—*Irena* Horsfield.

Remarks.—The birds of this new family comprise eight current species, two of which are, however, but subspecies, and an additional new subspecies, hereinafter described. Authors have hitherto included all these in the single genus *Irena*, but structural differences necessitate the division of this into two genera, as follows:

***Irena* Horsfield**

Irena Horsfield, Trans. Linn. Soc. Lond., ser. 1, XIII, pt. 1, May, 1821, p. 153 (type by monotypy, *Coracias puella* Latham).

Generic characters.—Tail rather long, about four-fifths of wing; lower tail-coverts falling short of end of tail by more than one and one-half times the length of tarsus; and upper tail-coverts falling short of end of tail by two or more times the length of tarsus.

Type.—*Coracias puella* Latham.

In the original diagnosis of *Irena* the only species that Horsfield cites is “*Coracias puella*, *Lath. Ind. Orn.* 171,” with which he misidentifies Javan specimens of the species not until long afterward described as *Irena turcosa* by Walden. The type of this genus must, therefore, be the only species mentioned, *Coracias puella* Latham; not, as Sharpe³ states, *Irena turcosa* Walden; particularly since the latter had no standing whatever at the time of the institution of the generic name *Irena*.

Of the forms now allotted to the restricted genus *Irena*, one, *Irena ellae* Steere, is certainly but a subspecies of *Irena melano-chlamys* Sharpe, as individual variations in these two overlap the differences. With this change, the species of this group will be as follows:

Irena melano-chlamys melano-chlamys Sharpe.

Irena melano-chlamys ellae Steere.

Irena cyanogastris Vigors.

Irena puella (Latham).

Irena tweeddalii Sharpe.

Glauconympha, gen. nov.

Generic characters.—Similar to *Irena* Horsfield, but tail shorter, only three-fourths of the length of wing; lower tail-coverts much longer, falling short of end of tail by less than length of tarsus, and sometimes reaching even beyond the end of tail; and upper tail-coverts much longer, falling short of end of tail by not more than the length of tarsus.

Type.—*Irena cyanea* Bebbie.

The bird from Borneo and Sumatra, *Irena crinigera* Sharpe, is by individual variation subspecifically connected with *Irena*

³ *Cat. Birds Brit. Mus.*, 6: 174. 1881.

cyanea from the Malay Peninsula, and must therefore stand as *Glauconympha cyanea crinigera*. Its name *criniger* is a Latin adjective (not a noun, as some authors apparently think) of which the feminine nominative is *crinigera*, as above written. Birds of this species from the Barussan Islands, off the western coast of Sumatra, are found to differ subspecifically from the typical race of the mainland, and as they are apparently undescribed, may be called:

Glauconympha cyanea megacyanea, subsp. nov.

Subspecific characters.—Similar to *Glauconympha cyanea crinigera* from Borneo and Sumatra, but larger; female with both upper and lower parts darker, more bluish (less greenish).

Description.—Type, adult female, No. 179254, U. S. Nat. Mus., Pulo Tuanku, Banjak Islands, January 23, 1902; Dr. W. L. Abbott. Upper surface dusky green blue No. 1,⁴ but the tips of most of the feathers chessylite blue, and the interscapulum with a more greenish shade, the upper tail-coverts dark chessylite blue; tail brownish black, the middle pair of rectrices and outer webs of the three adjoining pairs, dark green blue slate; wings blackish fuscous, the lesser coverts dusky green blue No. 1, the broad edgings of median and greater coverts and tertials, and narrow margins of primary coverts, secondaries, and a few of the inner primaries, dark greenish blue like the interscapulum; lores and nasal feathers between neutral gray and deep neutral gray; sides of head and neck like the interscapulum; throat greenish blue, between dark gobelin blue and terre verte green; breast dull jouvence blue; abdomen dull, somewhat greenish capri blue; crissum dark orient blue; lining of wing fuscous, the outer feathers edged with greenish blue; "iris red; bill and feet black."

Measurements.—Male:⁵ wing, 115–124 (average, 119.9) mm.; tail, 82.5–91 (86.6); exposed culmen, 21–23.5 (22.3); height of

⁴ The colors here mentioned are based on Mr. Ridgway's "Color Standards and Color Nomenclature."

⁵ Eleven specimens, from South Pagi Island, Nias Island, Pulo Mansalar, the Batu and Banjak Islands, western Sumatra.

bill at base, 9–10 (9.6); tarsus, 16–18.5 (17.5); middle toe without claw, 14–14.5 (13.7).

Female:⁶ wing, 118–119 (average, 118.6) mm.; tail, 85–91 (88.1); exposed culmen, 23.5–24.5 (23.8); height of bill at base, 9.5–10.5 (10); tarsus, 17.5–19 (18.1); middle toe without claw, 14–15 (14.5).

Geographic distribution.—Nias, Mansalar, the Pagi, Batu, and Banjak Islands, with doubtless others of the Barussan chain off the western coast of Sumatra.

The subjoined measurements of *Glauconympha cyanea crinigera*, from Bornean and Sumatran specimens, are added here for convenience of comparison with those of the present new race:

Male.—Wing, 113.5–119 (average, 116) mm.; tail, 74–84.5 (81.5); exposed culmen, 21–23 (21.8); height of bill at base, 9–10.5 (9.5); tarsus, 15–18 (16.3); middle toe without claw, 13–14 (13.5).

Female.—Wing, 114–118 (average, 115.6) mm.; tail, 82–88 (84); exposed culmen, 22–24 (23.2); height of bill at base, 9–10.5 (9.6); tarsus, 16.5–19 (17.3); middle toe without claw, 14–14.5 (14.3).

The species and subspecies referable to the new genus *Glauconympha* are as follows:

Glauconympha turcosa (Walden).

Glauconympha cyanea cyanea (Begbie).

Glauconympha cyanea crinigera (Sharpe).

Glauconympha cyanea megacyanea Oberholser.

⁶ Three specimens, from South Pagi Island, Nias Island, and the Banjak Islands, western Sumatra.