

A REVISION OF THE PHILIPPINE TROGON

(*HARPACTES ARDENS*)

by

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All of the trogons of Asia and adjacent islands were placed by Peters (1945) in the genus *Harpactes*, with eleven species being recognized. Although most of these were considered to be polytypic, no subspecies had then been described of the endemic Philippine species *H. ardens* (Temminck). As might be expected of an archipelago-inhabiting species in a genus tending toward polytypy, *H. ardens* is indeed geographically variable. Since 1945, three additional subspecies of *ardens* have been named, and a fourth is described in the present paper, making five in all.

As is true of all trogons, of both the Old and New World, the carotenoid pigments of *Harpactes* fade, often quite rapidly, in museum specimens, even when kept in total darkness. This severely limits the usefulness of these colours as taxonomic characters, although they are in fact geographically variable in both intensity and pattern. It is virtually mandatory to make comparisons only among recently-taken specimens. Even the comparison of older series of approximately the same age is of only limited usefulness, as the rate of fading is not uniform from specimen to specimen. The original description of *Harpactes ardens luzoniensis* Rand and Rabor (1952), which stated that Luzon males differed from Mindanao *ardens* "in the duller, paler red of the underparts, especially pronounced in the crissum," was obviously based on the comparison of old Luzon with fresh Mindanao specimens; the type of *luzoniensis* was collected in 1904. Fortunately there are other characters by which *luzoniensis* can be upheld, and the authors themselves apparently soon discovered the unreliability of colour of underparts in this species, as in a later paper (1959) discussing geographic variation in this species, Rand and Rabor mention only bill size and the colour of the upperparts in characterizing *luzoniensis*.

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Through a fortuitous combination of circumstances, excellent series of *Harpactes ardens* from several parts of the Philippines, all taken in 1956 or later, were available for my examination (along with older material) at the American Museum of Natural History in 1962. Shortly afterwards I was able to examine specimens at the Field Museum of Natural History, taken during 1959-1961. I am grateful to Drs. Dean Amadon and Austin L. Rand for access to this material. Travel to these museums was supported in part by a grant from the Frank M. Chapman Memorial Fund in connection with a study of the birds of Leyte.

Because of the fugitive nature of the red colours of *Harpactes ardens*, I have taken the somewhat unusual step of specifying the years of collection in the lists of specimens examined.

The Philippine Trogon is widely distributed in the main eastern chain of islands of the Archipelago: Luzon, Polillo, Marinduque, Samar, Leyte, Bohol, Dinagat, Mindanao, Basilan. It belongs to the group of species within *Harpactes* (including *H. fasciatus*, *kasumba*, *whiteheadi*, and *orrhophaeus*) in which the females lack the bright red underparts of the males. Males of *ardens* differ from any of these other species in having the breast pale grey washed with bright pink, contrasting with the black of the face and the rich red of the abdomen (older faded specimens may have the breast pure grey and the abdomen pale pink). The female of *ardens* most closely resembles *H. o. orrhophaeus* of the Malay Peninsula and Sumatra, but is blacker on the face and duller buff on the breast. The following subspecies of *Harpactes ardens* may be recognized.

Harpactes ardens ardens (Temminck)

Trogon ardens Temminck, Nouveau Recueil de Planches Coloriées d'Oiseaux, livr. 68, 1826: pl. 404.

Type locality: Mindanao.

Characters: A large-billed, brightly-coloured subspecies. See entries for other races, below, for comparisons.

Range: Mindanao and Basilan. Dinagat specimens, not examined, probably belong here.

Specimens examined: MINDANAO: Zamboanga Prov., 1 (1891), 4 (1898); Davao Prov., 4 (1889), 1 (1903); Cotabato Prov., 10 (1962). BASILAN: 3 (1898).

Harpactes ardens luzoniensis **Rand and Rabor**

Harpactes ardens luzoniensis **Rand and Rabor**, Natural History Miscellaneous (Chicago Acad. Sci.), no. 100, 1952: 2.

Type locality: Dinampan, Bataan Province, Luzon Island.

Characters: Contrary to the original description, there is no consistent difference between recently-taken males from southern and central Luzon on the one hand and Mindanao on the other, in the colour of the underparts. The upperparts of *luzoniensis* are, however, darker and duller brown than those of *ardens*, as mentioned by **Rand and Rabor** in their 1959 paper. In males the anterior portion of the crown is black, only the posterior half having the maroon-red suffusion that covers most or all of the crown of *ardens*. In both sexes the bill of *luzoniensis* is distinctly smaller than that of *ardens*. **Rand and Rabor** (1959) gave the bill length (culmen from base) of 13 Mindanao males as 24.5-26.5 mm.; six additional Mindanao males that I have measured also fell within this range. **Rand and Rabor** had only three Luzon males, and (other than the type of *luzoniensis*) did not give the origin within Luzon of their specimens. As will be shown beyond, birds from northeasternmost Luzon have slightly larger bills than those from elsewhere on that island. Males from central and southern Luzon have bills measuring 19.5, 20.5, 21, 21, 21, 22, 23, 23. In these relatively small samples, therefore, there is no overlap in bill measurements between *luzoniensis* and *ardens*.

Range: Central and southern Luzon; Marinduque specimens (not seen) probably belong here. Specimens from northwestern Luzon are nearest *luzoniensis*, but tend toward a subspecies from northeastern Luzon, described below.

Specimens examined: LUZON: Bataan Prov., 3 (1947); Camarines Sur Prov., 12 (1961); Laguna Prov., 2 (1914), 5 (1958), 2 (1961); Rizal Prov., 2 (1913); Sorsogon Prov., 1 (1903), 20 (1961); Tayabas Prov., 1 (1904). Intergrades nearest *luzoniensis*: LUZON: Abra Prov., 3 (1947); Ilocos Norte Prov., 21 (1959).

Harpactes ardens linæ Rand and Rabor

Harpactes ardens linæ Rand and Rabor, Fieldiana: Zoology, 39, 1959: 276.

Type locality: Sandayong, Sierra Bullones, Bohol.

Characters: This subspecies was described from 11 specimens from Bohol and 8 from Samar. It was characterized as combining "the characters of the more southern *ardens* (large bill) and of the more northern *luzoniensis* (duller orange brown back, blacker head)." This is a somewhat unsatisfactory subspecies, as most of its characters represent stages along a cline of intermediacy between *ardens* and *luzoniensis*, as, in fact, predicted by Rand and Rabor (1952) before they had seen material from the central islands. The crown colour of males bridges, in general, the gap between the two races, although it is never quite so red as in *ardens*. The dorsal colour of the males examined is actually nearer that of Mindanao males, not Luzon males as stated by Rand and Rabor (1959); the brightest-backed (i.e., most *ardens*-like) male of *linæ* seen was a topotype from Bohol. The size and shape of the bill of *linæ* is nearest *ardens*, as stated by the describers, but averages slightly smaller, as indicated below:

13 ♂ *ardens* from Mindanao (Rand and Rabor, 1959)

24.5-26.5 (av. 25.4)

6 ♂ *linæ* from Bohol (Rand and Rabor, 1959)

22.5-26.5 (av. 24.3)

3 ♂ *linæ* from Samar (Rand and Rabor, 1959)

24.5-26 (av. 25.3)

4 ♂ *linæ* from Leyte (this study)

24.5-25.5 (av. 25.0)

8 ♂ *luzoniensis* from C. and S. Luzon (this study)

19.5-23 (av. 21.3)

Females of *linæ*, as admitted by the describers, are even less clearly distinct from other races than are males, again representing a series of variable intermediates between *ardens* and *luzoniensis*. As in the males, the brightest-backed and least *luzoniensis*-like female seen was a Bohol topotype.

The only character of *linae* that appears **not** to represent intermediacy between *ardens* and *luzoniensis* is one not mentioned by the describers. In males of *linae* examined, the black throat patch is more extensive and less clearly defined than in other races, extending posteriorly as a dark grey wash; this shows up especially well in old specimens that have lost the pink from the grey breast. But for this character, *linae* might better be considered simply as *ardens* intergrading somewhat toward *luzoniensis*.

Range: Bohol, Samar, and Leyte. **Rand and Rabor** (1959) had not seen Leyte specimens, but stated that they were presumably assignable to *linae*. **Meyer de Schauensee and du Pont** (1962) identified 4 Leyte birds in the Academy of Natural Sciences of Philadelphia as *linae* on the basis of literature descriptions, as they had no comparative material from Bohol or Samar. They stated "...our birds from Leyte differ very slightly from Mindanao birds by having the back duller... They differ more clearly from Luzon birds by their larger bills." Comparison of the Leyte series in the American Museum of Natural History with specimens of *linae* from Bohol and Samar had led me independently to the same conclusion.

Specimens examined: BOHOL, 2 (1958); SAMAR, 1 (1887), 1 (1896), 3 (1957); LEYTE, 8 (1961).

Harpactes ardens minor Manuel

Harpactes ardens minor Manuel, Philippine Journal of Science, **86**, "1957" [= 1958]: 3.

Type locality: Anibawan, Polillo Island.

Characters: This is the only subspecies of *Harpactes ardens* that differs significantly in wing length from other populations. It is, as stated by the describer, smaller. **Manuel** had five specimens, with wings ranging in length from 135 to 138 mm. (sexes are alike in size), whereas ten specimens from Luzon, Samar, and Mindanao ranged from 139 to 146. My measurements of different specimens show somewhat wider variability, with consequent overlap, but it is still clear that *minor* is smaller; 11 *minor* 128-138 (av. 133.1); 19

luzoniensis 134-143 (av. 137.7). The bill of *minor* does not differ significantly in size from that of the small-billed subspecies *luzoniensis*. Manuel described the males of *minor* as "having the red color of the breast, belly and undertail coverts much more intense, the breast almost brick red". All of Manuel's material of this species had been recently collected, the older specimens in the National Museum of the Philippines having been destroyed during the battle for Manila in World War II. I have also compared fresh specimens of *minor* with those of other races, and can confirm the colour character described by Manuel. My examination of specimens of this race, however, serves to underline the critical importance of using fresh material. In 1962 I compared two males of *minor* taken in 1956 with three taken in 1959. There was as yet no significant difference in the red colour of the lower breast and abdomen, but the pink wash across the grey upper breast had already begun to fade in the older birds, and the maroon-red wash over the black crown had begun to disappear, giving a darker appearance to the crown (an 1891 specimen in Carnegie Museum of *ardens*, a race with the maximum extent of maroon on the crown, now lacks any trace of that colour). In unfaded specimens, the maroon wash extends, on the average, slightly farther forward in *minor* than in *luzoniensis*. The dorsal colour of males of *minor* averages richer and brighter than those of *luzoniensis*, but this is less evident in females. Compared with *ardens*, males of *minor* are quite similar in colour dorsally (but, of course, are richer red below and have more black on the crown). Females of *minor*, on the other hand, are richer in colour both above and below than females of *ardens*.

Range: Polillo Island. "It is believed this form inhabits also the other forested islands of the Polillo group like Jomalig, Palasan and Pananongan in which no collecting has yet been made" (Manuel, 1958).

Specimens examined: POLILLO: 4 (1956), 7 (1959).

Harpactes ardens herberti, new subspecies

Type: AMNH no. 767748, adult male, collected 11 May 1961 at Mt. Palanan (3000-3400 feet), west of Sancad, Isabela Province, Luzon Island, by G. Alcasid, M. Celestino, T. Oane, and J. Ramos (collectors' original no. 405).

Characters: Males similar to *H. a. luzoniensis* Rand and Rabor of southern and central Luzon, but all browns of dorsum duller, darker, and less rufescent; maroon-red wash in fresh plumage covering entire crown as in the geographically distant *H. a. ardens*; reds of underparts, in series, averaging slightly paler, most noticeably on the under tail coverts; individuals with a reduced amount of pinkish-red wash on the grey of the upper breast more frequent than in **recently-collected** series of other races. In females the head averages browner, not greyish or blackish as in freshly-collected *luzoniensis* (but old specimens of *luzoniensis* fade to almost as brown); the upperparts, in general, are darker and less rufescent than *luzoniensis*, as in males. One stub-tailed juvenile of *herberti* in the Field Museum is decidedly duller in colour, less brightly brown above and buff below, than two similarly-aged young of *luzoniensis* from Sorsogon Province. There is no difference in wing length (19 *luzoniensis* 134-143, av. 137.7; 8 *herberti* 135-141, av. 137.5), but the bill of *herberti* averages slightly larger than that of *luzoniensis* (8 ♂ *luzoniensis* 19.5-23, av. 21.3; 5 ♂ *herberti* 20-24, av. 22.7).

Etymology: This genus already contains a form honouring Mrs. Deignan by her given name (*Harpactes oreskios stellae* Deignan). It seems appropriate, therefore, to dedicate this new subspecies in similar fashion to her late husband, who was my colleague, mentor, and friend.

Range: The Sierra Madre region of northeastern Luzon Island, in the provinces of Isabela and Cagayan. As mentioned in the discussion of *luzoniensis*, intergradation with that subspecies occurs in north-western Luzon in the provinces of Ilocos Norte and Abra.

Specimens examined: LUZON: Isabela Prov., 4 (1895), 7 (1961); Cagayan Prov., 25 (1960).

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