CONTRIBUTIONS TO A REVIEW OF PHILIPPINE SNAKES, IV

THE GENERA CHRYSOPELEA AND DRYOPHIOPS

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TWO TEXT FIGURES

In this fourth contribution to a review of Philippine snakes two arboreal genera are treated, *Chrysopelea* and *Dryophiops*. The former is widely distributed throughout the islands, the latter has been taken only in Luzon, Negros, and Coron. It, too, is likely to be found in other islands of the Philippine group.

The two genera are closely related. Contrary to the views of Meise and Hennig (1935), however, they are sufficiently distinct to be treated as separate genera.

TERMINOLOGY

Standard length: distance from tip of snout to anal opening.

*: following locality listed under "Range" indicates specimens were seen from that site by the author.

Scale reduction formula, 17 (–7 or 3 + 4 [133 to 139]) 15: dorsal longitudinal scale rows reduce from 17 to 15 by either loss of the seventh row or fusion of the third and fourth rows on both sides at level of ventral shields 133 to 139.

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Genus CHRYSOPELEA H. Boie

Chrysopelea H. Boie (1826) 237 (type species *Coluber ornata* Merrem, by original designation).

Tyria [*nec* Huebner (1819) Lepidoptera] Fitzinger (1826) 29 (type species *Coluber ibibiboca* Daudin, by original designation).

Crysopelea Taylor (1917) 366 (erroneous subsequent spelling).

Definition.—Maxillary teeth 20 to 22, the posterior two or three slightly enlarged and grooved; head distinct from neck; snout rounded in front; head somewhat depressed; eye large, pupil round; body slightly compressed, elongate; scales smooth or feebly keeled; in 17 longitudinal rows at midbody; ventrals with suturelike keel on each side and slight notch corresponding to each keel; tail long; subcaudals paired, otherwise like ventrals; hypapophyses usually present on posterior dorsal vertebræ; hemipenes elongate, unforked, spinose.

Remarks.—The snakes of this genus are close to those of the genus *Dendrelaphis* from which they have been distinguished by the presence of grooved posterior fangs and hypapophyses on the posterior dorsal vertebræ. Meise and Hennig [(1935) 138] suggested that the presence or absence of grooved posterior maxillary teeth was of little taxonomic importance, and they could see no reason for maintaining the two genera as distinct. In 1938, Brongersma showed that hypapophyses were frequently absent in specimens of *Chrysopelea ornata* he examined. Inasmuch as species of *Dendrelaphis* are not known to possess hypapophyses it would seem that the two genera are connected by *Chrysopelea ornata* (= *C. paradisi* of Smith, 1943 [in part]). Similarities in hemipenes and in the structure of the ventral keels [Wall (1908) 229–230] between *C. ornata* and *D. pictus* further suggest a close relationship.

The two genera are treated as distinct groups (a review of *Dendrelaphis* will appear at a later date). There has been no opportunity to study adequately all the species involved and I believe it necessary that a thorough review of the problem should be undertaken before the established taxonomic arrangement is seriously altered.

In 1935, Meise and Hennig also suggested that differences separating *Chrysopelea* and *Dryophiops* were trivial compared to the overall similarities between the two genera, and they proposed that *Dryophiops* be reduced to a subgenus. They pointed out that *Chrysopelea ornata,* in which there are occasionally 15 rows of scales at midbody, relates those species of *Dryophiops* having 15 scale rows to species of *Chrysopelea* that have 17 scale rows normally. Only the shape of the pupil, horizontal in *Dryophiops* and round in *Chrysopelea,* distinguish the genera.

Overlooked by Meise and Hennig were several small but nonetheless important characters that distinguish the two. In

Dryophiops, the scales are set at a very oblique angle, more so than in *Chrysopelea;* the snakes are more slender, the head narrower and more flattened; and the tail considerably longer. Differences in head structure are reflected in differences in head scutellation. In *Dryophiops* the nasal is small and undivided, with a small nostril; the loreal, when present, is elongate and narrow; the preocular extends onto the dorsum of the head and usually contacts the frontal; and the pupil of the eye is horizontally oval. These characteristics (excepting the last) are associated with flattening of the head. In *Chrysopelea* the head is deeper, the nasal larger and divided, with a large nostril, a large loreal is always present (occasionally fused to the prefrontal), and the preocular never reaches the dorsum of the head.

A single species of *Chrysopelea* reaches the Philippines, where it is widely distributed.

CHRYSOPELEA PARADISI H. Boie.

Coluber ornatus SHAW (1802) 477 (part [see below]; type loc: restricted herein to Ceylon; type based on Seba, vol. 1, pl. 94, fig. 7, and vol. 2, pl. 7, fig. 1, and pl. 61, fig. 2).

Chrysopelea ornata H. BOIE (1826) 237 (designated as type species of nominal genus *Chrysopelea* Boie); F. BOIE (1827) column 546 (Java; description); GÜNTHER (1858) 146 (part; 2 specimens listed from Philippines; synonymy, description); COPE (1860) 556 (Philippine Islands; listed); PETERS (1861) 687 (Samar [Lauang]; listed); GÜNTHER (1864) 299 (part; "var. a" from Philippines; synonymy, color pattern); JAN (1869), Livr. 33, pl. 1, fig. 1; STEINDACHNER (1867) 71 (Luzon [Manila]; listed); FISCHER (1885) 80 (southern Mindanao; listed); BOETTGER (1886) 112 (distribution in Philippines compiled); BOULENGER (1896) 196 (part; specimens listed from Negros Island and from "Philippines"; synonymy, description, color pattern variation, counts of material examined); BOETTGER (1898) 108 (distribution compiled); WALL (1908) 228, pl. 6 (color pattern of Philippine specimens; thorough review of habits of *C. ornata*); GRIFFIN (1909) 600 (Palawan [Iwahig]; listed); (1910) 214 (Polillo; listed); (1911) 264 (listed from Banton, Bantayan, Luzon, Mindoro, Mindanao, Palawan, Polillo, and Samar; listed in key); TAYLOR (1922a) 216, pl. 11, figs. 6–8 (examined material from Bubuan, Camiguan, Mindanao [Bunawan], Polillo, Balabac, Mindoro; synonymy, description, variation, counts and measurements of material examined).

Crysopelea ornata TAYLOR (1917) 366 (Negros; listed); (1918) 261 (Bubuan; listed); (1922b) 138 (Luzon [Mt. Makiling]; listed).

Chrysopelea paradisi H. BOIE (1826) 237 (*nomen nudum*); in: F. BOIE (1827) column 547 (type loc: Java; type unknown; original

description); SMITH (1943) 254 (listed from Philippine Islands; brief description); HAAS (1950) 586 (listed from Philippines; synonymy, distribution compiled).

Range.—(Philippine localities only, Figure 1.) BALABAC *. BANTON. BANTAYAN. BASILAN: Port Holland *. BUBUAN. CAMIGUIN. CEBU: Buhisan Dam *; Cebu City *; Antuwanga area *. JOLO: Bud Datuh Mts.*. KALOTKOT *. LEYTE: without exact locality *. LUZON: Bataan Province (Mt. Mariveles *); Laguna Province (Mt. Makiling, Mt. San Cristobal *); Rizal Province (Quezon *, Manila); Zambales Province (Binanga*); Cavite Province (Noveleta *). MARONGAS *. MINDANAO: Agusan Province (Bunawan *); Zamboanga Province (Zamboanga City *, Parang *). MINDORO: San Jose *; Sumagui *; Medio Id*. NEGROS: Negros Oriental Province (Dumaguete *). PALAWAN: Iwahig. POLILLO: without exact locality *. SAMAR: Lauang; without exact locality *. SIBUYAN. SIQUIJOR: Tag-ibo, San Juan *.

Material examined (*38*).—BALABAC: (CM 2567). BASILAN: Port Holland (CAS 60470). CEBU: Antuwanga area (SU 17916); Buhisan Dam (SU 18446); Cebu City (SU 13097, 20691). JOLO: Bud Datuh Mts. (SU 18445); without exact locality (SU 13099). KALOTKOT: without exact locality (CAS 60574): LEYTE: without exact locality (CAS 60942). LUZON: Bataan Province: Mt. Mariveles (USNM 50413); without exact locality (SU 6264); Cavite Province: Noveleta (CAS 15329); Laguna Province: Mt. San Cristobal (CM 2566); Rizal Province: Quezon (USNM 144180); Zambales Province: Binanga (CAS 15330 and 15331). MARONGAS: (USNM 38582). MINDANAO: Agusan Province: Bunawan (CM 2559); Zamboanga Province: Parang (USNM 39011), Zamboanga City (SU 13098). MINDORO: San Jose (AMNH 73413); Sumagui (CM 2561 to 2565). MEDIS: Galera Bay (USNM 38986). NEGROS: Oriental Negros Province: Dumaguete (SU 18790). POLILLO: without exact locality (CAS 62427). SAMAR: without exact locality (USNM 53533, 122210 to 122212). SIBUYAN: (USNM 36114). SIQUIJOR: Tag-ibo, San Juan (SU 18444). SULU: without exact locality (CAS 62491). PHILIPPINES: without exact locality (ANSP 5238, CAS 15332).

Additional specimens from Thailand, Indo-China, Burma, and Peninsular India have been seen.

Taxonomic notes.—In 1943, Smith concluded that the presence or absence of hypapophyses in samples of *C. ornata* Auct. could be "correlated with geographical distribution, and also

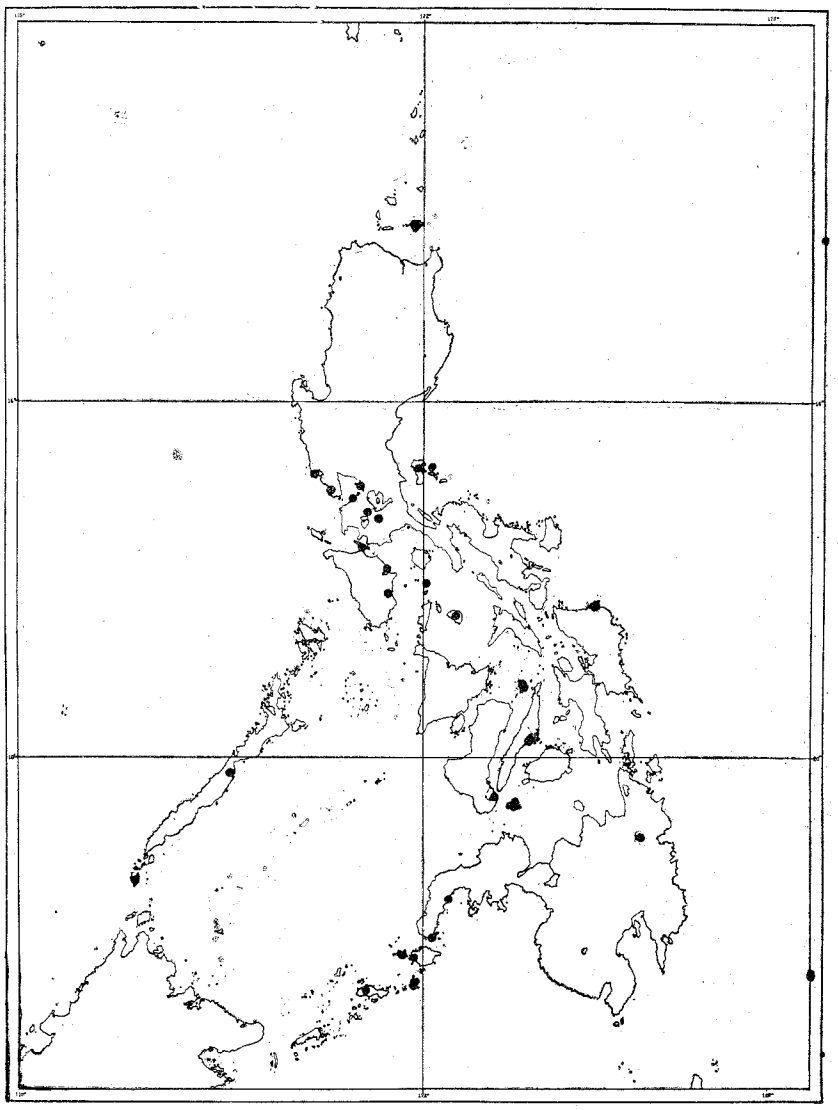

FIG. 1. Distribution of *Chrysopelea paradisi* in the Philippines.

with color pattern. The [hypapophyses] processes are absent in the specimens inhabiting India and Indo-China, but present in those in the Malay Peninsula and Archipelago. They must therefore be regarded as distinct species." Brongersma [(1938) 240–241] has shown that hypapophyses are only rarely absent among specimens from Indonesia and I have determined the same to be true for Philippine specimens. Smith's conclusions appear justified, and his arrangement is adopted here.

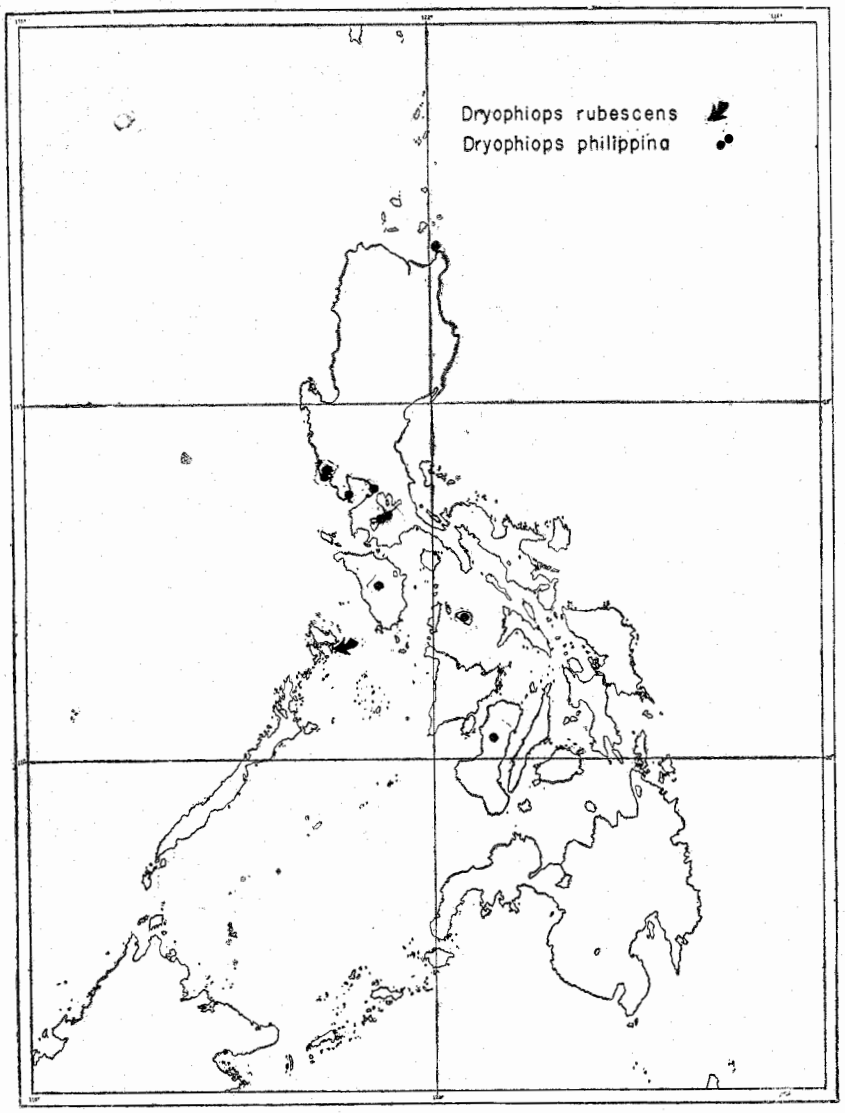

FIG. 2. Distribution of *Dryophiops philippina* and *Dryophiops rubescens* in the Philippines.

Smith [(1943) 251] applied the name *Chrysopelea ornata* to those populations, lacking hypapophyses on the posterior dorsal vertebræ, from Ceylon and Peninsula India. According to Shaw [(1802) 477], who based his description of *Coluber ornata* on Seba's plates, the species was "native of some of the West-Indian islands, Martinico, etc. and, according to Seba, of the East-Indian islands also, as Ceylon and Java." The West In-

dian localities are in error. Consequently, the type locality must be selected from either Ceylon or Java. Smith did not restrict the type locality, although he applied the name to the Ceylon-Peninsular India-Indo-Chinese species rather than that inhabiting the Malay Peninsula and Archipelago. Inasmuch as the most important literature dealing with *C. ornata* (*sensu lato*) has concerned itself with continental populations, I believe the name should be conserved for them, and I hereby restrict the type locality of *Coluber ornata* Shaw to Ceylon.

From the above it follows that another name must be used for the Malay Peninsula and Archipelago populations. Smith applied Boie's name *Chrysopelea paradisi*, based on Javanese material, to those populations.

Color pattern variation among the several samples of this species from the Philippines is considerable, and it has not been possible to correlate the variation with geographic distribution, or sex. Some aspects of the pattern are subject to ontogenetic changes, especially the presence of well-defined stripes, which are very distinct in young specimens but which tend to become indistinct in adults. In one aspect, the color pattern is stable. The predominant color is black, which is characteristic of Malay-Indonesian populations.

Diagnosis.—Hypapophyses usually present on posterior dorsal vertebræ; predominant dorsal color black with green or yellowish green centers to most of the scales. Standard length: (♂) 573 mm, (♀) 750 mm; tail length: (♂) 285 mm, (♀) 354 mm.

Descriptive notes.—Maxillary teeth 20 to 22; snout broadly rounded, depressed; internasals shorter than prefrontals; frontal longer than broad, about as long as its distance from the snout; parietals almost as broad as long, longer than frontal; nasal rectangular, divided, with large nostril; loreal present or fused to prefrontal; 1 preocular, frequently in contact with frontal; 2 postoculars; temporals 2 + 2, rarely 1 + 2; 9 upper labials, rarely 10, fourth, fifth and sixth or fifth, sixth and seventh bordering orbit; 8 to 11 lower labials, first five in contact with short anterior chin shields; posterior chin shields longer than anterior pair; dorsal scales smooth, reduce 17(–7 or 3+4[1] [133 to 139]) 15(–7 or 3+4[1] [140 to 143]) 13; caudodorsal scales reduce 6(2+3 [8 to 15]) 4(1+2 [61 to 85]) 2; ventrals 204 to 234; subcaudals 116 to 154; anal plate divided.

[1] Reduction of the dorsal scale rows results from the combination of a pair of paravertebral and a pair of lateral reductions. Either one may occur first.

Hemipenes extend to the twenty-first to thirty-fourth subcaudal plate, unforked; sulcus spermaticus unforked; spinose throughout except at distal tip where there are several oblique folds; numerous narrow longitudinal plicæ present throughout organ, most conspicuous in distal third.

Color (in alcohol) black above with a greenish spot on each scale, some scales with larger spots which are arranged into crossbars or with a vertebral series of tetrapetalous reddish or greenish spots; head with three solid crossbars, one between prefrontals and frontal, a second along the common suture of parietals and supraocular-frontal, and a third along the posterior border of parietals; a series of three broken crossbars also present, one between each of the solid bars; below immaculate yellowish green to blue green; young black with a distinct series of well-defined whitish crossbars on the body and tail.

Sexual dimorphism.—Inter-island variation in ventral and subcaudal counts is considerable (it is absolutely necessary to treat each sample separately when making comparisons between sexes). In general the sexes differ, males having fewer ventrals and more subcaudals than females (Tables 1 and 2). Only the small sample from Mindanao seems to differ in that the females have more subcaudals than males. Data for the females of this sample were taken from Taylor [(1922a) 217, Table 45]; I have not confirmed his observations.

Unfortunately, the available samples are small and come from several islands. In addition, both young and adult are represented. Because the tail length/standard length ratio changes with growth, and because of extensive inter-island variation in proportional measurements, a satisfactory determination of possible sexual dimorphism in this character is not possible. However, males seem to have slightly longer tails than females, and the ratio for male specimens is frequently higher than that for females (Table 3).

I find no indication of sexual dimorphism in color or color pattern, nor have I found any differences in the appearance of the scales, especially those in the vicinity of the vent.

Inter-island variation.—The variation in ventral and subcaudal counts has been summarized. There appears to be a trend toward increase in the number of subcaudals among northern samples, suggesting a possible north-south cline. There is considerable color pattern variation but these could not be associated with distribution.

TABLE 1.—*Summary of variation in the number of ventral shields in Chrysopelea paradisi.*

Island	N	Male mean	Range	N	Female mean	Range
Jolo				2	206.5	204–209
Bubuan				1	208.0	
Basilan	1	212				
Mindanao	1	210		3	215.0	213–218
Leyte				1	212.0	
Samar	1	216		2	213.0	212–214
Negros	1	214		1		
Siquijor	1	223				
Cebu	1	219		2	222.0	219–225
Mindoro				2	217.5	216–219
Polillo	2	209	208–210	3	214.0	208–217
Kalotkot	1	223				
Luzon				2	228.0	222–234
Camiguin	1	209				

TABLE 2.—*Summary of variation in the number of subcaudal shields in Chrysopelea paradisi.*

Island	N	Male mean	Range	N	Female mean	Range
Jolo				2	121.0	116–126
Bubuan						
Basilan	1	136				
Mindanao	1	123		3	133.0	128–138
Leyte						
Samar	1	134		3	131.6	129–133
Negros	1	125				
Siquijor	1	145				
Cebu	1	154		1	145.0	
Mindoro				2	135.5	131–140
Polillo	2	139	138–140	3	134.0	130–142
Kalotkot	1	143				
Luzon				2	143.5	140–147
Camiguin	1	134				

TABLE 3.—*Summary of variation in the tail length/standard length ratio in Chrysopelea paradisi.*

Island	N	Male mean	Range	N	Female mean	Range
Jolo				2	0.450	0.420–0.480
Bubuan						
Basilan						
Mindanao	1	0.464		2	0.405	0.380–0.430
Leyte						
Samar	1	0.472		2	0.473	0.457–0.488
Negros	1	0.466				
Siquijor	1	0.461				
Cebu	1	0.497		1	0.472	
Mindoro				2	0.463	0.458–0.467
Polillo	1	0.434		3	0.429	0.417–0.444
Kalotkot						
Luzon				2	0.413	0.408–0.418
Camiguin	1	0.411				

Ecological notes.—A most thorough review dealing with the Malayan "flying snake" was prepared many years ago by Wall [(1908) 228–243]. Smith [(1943 253] made several remarks on the feeding habits and aerial gliding or "flying" abilities of this snake [see also Shelford (1906) 227]. The reader is referred to previously published accounts.

Genus DRYOPHIOPS Boulenger

Dryophiops BOULENGER (1896) 193 (type species *Dipsas rubescens* Gray, by subsequent selection by Leviton [see below]).

Definition.—Maxillary teeth 16 to 21, the middle series very slightly enlarged, about as long as slightly enlarged rear fangs; anterior mandibular teeth enlarged; head distinct from neck, with distinct canthus rostralis; eye moderate, pupil horizontal; nasal small, undivided, with small nostril; frontal bell-shaped, usually in contact with preocular; body elongate, slender, compressed; scales smooth, obligue, without apical pits, in 15 longitudinal rows at midbody, reducing to 13 or 11 posteriorly; ventrals with suturelike lateral keel and a notch on each side corresponding to keel; tail long, slender; subcaudals paired, keeled and notched; hypapophyses absent throughout vertebral column; hemipenes unforked, sulcus unforked, minute spines set into transverse flounces present distally.

Remarks.—Boulenger (1896) proposed the nominal genus *Dryophiops* to accommodate two nominal species, *Dipsas rubescens* Gray and *Dryophiops philippina* Boulenger. Neither species was selected as type of the genus. Inasmuch as *Dipsas rubescens* Gray is the older of the two it is hereby selected as type species.

Both species of *Dryophiops* have been recorded in the Philippines; *Dryophiops rubescens* from the Palawan Archipelago, and *D. philippina* from the northern Philippines (Luzon, Mindoro, Negros islands). *Dryophiops philippina* has been distinguished from *D. rubescens* by the absence of a loreal shield. The two species can also be distinguished by differences in ventral and subcaudal counts, but these are believed to be clinal in character and probably do not reflect inherent genetic differences.

Key to the Philippine species of Dryophiops

1a. Loreal shield present; ventral 188 to 199 ..... *D. rubescens*
1b. Loreal shield absent; ventrals 177 to 188 ..... *D. philippina*

DRYOPHIOPS RUBESCENS (Gray).

Dipsas rubescens GRAY (1834) pl. 84, fig. 2 (type loc: Malay Peninsula [?]; type in British Museum; original figure).

Dryophiops rubescens TAYLOR (1925) 99, 110 (Coron Island [Peñon de Coron]; color pattern, variation).

Range.—(Figure 2.) Known in the Philippines only from Coron Island. Widely distributed throughout western Indonesia and the Malay Peninsula.

Material examined.—None.

Taxonomic notes.—Günther [(1858) 145; (1864) 299] and Steindachner [(1867) 71] recorded this species from the Philippines. Boulenger [(1896) 195] placed Günther's specimens, collected by H. Cuming, in *Dryophiops philippina.* Taylor [(1925) 110] stated that Steindachner's specimen might also be assigned to *D. philippina.* As a consequence, Taylor's record of *D. rubescens* from Peñon de Coron Island constitutes the only certain record for this species in the Philippines. Unfortunately, Taylor's specimen was lost during World War II when the Bureau of Science, in Manila, was destroyed, together with all collections. The data given by Taylor clearly indicates the correct identity of the specimen. Therefore, it seems likely that the species will be found in the islands of the Palawan Archipelago.

Diagnosis.—Loreal shield present; ventrals 188 to 199. Standard length: 585 mm; tail length, 255 mm.

DRYOPHIOPS PHILIPPINA Boulenger.

Chrysopelea rubescens (*nec* Gray) GÜNTHER (1858) 145 (part; Philippine Islands); (1864) 299 (part; length of Philippine specimen); STEINDACHNER (1867) 71 (one specimen from Philippines listed); BOETTGER (1886) 112 (part; Philippines; listed).

Dryophiops philippina BOULENGER (1896) 195, pl. 9, fig. 2 (type loc: Cape Engaño, Cagayan Province, northern Luzon [see discussion below]; syntypes in British Museum; original description, counts of material examined); GRIFFIN (1911) 264 (Luzon [Manila] listed in key); TAYLOR (1922a) 213, pl. 6, figs. 4–6 (Luzon [Bataan; Manila], Mindoro, Sibuyan; synonymy, description, color in life, variation, habits, measurements and counts of material examined); (1922b) 138 (Luzon [Los Baños]; habitat).

Range.—(Figure 2.) LUZON: Bataan Province (Lamao *); Cagayan Province (Cape Engaño); Laguna Province (Los Baños *; Mt. Makiling); Rizal Province (Manila); Zambales Province (Calaclan Mt.*; Binanga *). MINDORO: (without exact locality). NEGROS*: Negros Occidental Province (Dungga*). SIBUYAN*.

Material examined (12).—LUZON: Bataan Province: Lamao (CM 2430); Laguna Province: Los Baños (CAS 61163 to 61167); Zambales Province: Mt. Calaclan (CAS 15327); Binanga, vicinity of Subic Bay (CAS 15328). NEGROS: Negros Occidental Province: Dungga, about 15 km south Barrio Toyum (SU 21043). SIBUYAN: (CM 2432). PHILIPPINES: without exact locality (CM 2431).

TABLE 4.—*Summary of variation between sexes in Dryophiops philippina.*

Island	N	Male mean	Range	N	Female mean	Range
Ventrals	5	184.0	179–188	8	183.4	181–187
Subcaudals	4	132.8	131–135	9	122.4	111–133
Ventrals plus subcaudals	4	318.0	314–321	8	304.5	296–310
Tail length/standard length	4	0.505	0.495–0.514	7	0.457	0.383–0.487

Taxonomic notes.—Boulenger [(1896) 193] had three specimens before him when he described this species. Of these, only one was accompanied by exact locality. This specimen, from Cape Engaño, northern Luzon, is hereby selected as lectoholotype and Cape Engaño, Luzon, designated as type locality. By selecting a lectoholotype and restricting the type locality, I am fixing the name *Dryophiops philippina* upon the Luzon population. This is necessary in view of the fact that the species is more widely distributed within the Philippines than formerly thought, and future study may result in the recognition of one or more geographically distinct populations.

Diagnosis.—Loreal absent; ventrals 177 to 188. Standard length: (♂) 397 mm, (♀) 553 mm; tail length: (♂) 179 mm, (♀) 273 mm.

Descriptive notes.—Maxillary teeth 16 to 18; nasal small, undivided, tapering behind, about twice as long as deep; loreal absent, prefrontal in contact with second and third upper labials; 1 preocular frequently in contact with frontal; 2 postoculars; temporals usually 2 to 2, rarely 3 to 2; 9 upper labials, fourth, fifth and sixth bordering the orbit; 9 lower labials, the first four in contact with anterior chin shields; dorsal scales reduce 15 (–4 [or –5] [117 to 128]) 13 (–4 [or –5] [127 to 140]) 11; caudodorsal scales reduce 6 (2+3 [5 to 7]) 4 (1+2 [49 to 79]) 2; ventrals 177 to 188; subcaudals 111 to 135; and plate divided.

Hemipenes extend to 9th subcaudal plate; unforked; sulcus spermaticus unforked; basal ⅓ without ornamentation; distal ⅔ with thick, convoluted transverse plicæ beset with minute spines.

Color (in alcohol) dull grayish brown peppered with fine dark spots and a scattering of small black spots or blotches; a dark brown stripe passes through eye onto side of neck and another stripe originates on parietals and extends onto neck; below, lighter brown with a very thin darker stripe along ventrolateral portion of ventrals coincident with ventral keel.

Color (in life) "Above dull brownish gray, with many of the scales on first fourth of body edged or spotted irregularly with black, the rest of body with scattered dorsal spots, the scales minutely powdered with small various-sized dots; below creamy white, with a powdering of small and minute dots; throat and chin immaculate; head thickly spotted with rather large brownish spots; prefrontals each with a short line; internasals with diagonal lines; an irregularly edged line of lavender edged with dark brown goes from point of snout through eye to neck, and widens a little at angle of jaw; a dull stripe from occipital region to neck." [Taylor (1922a) 214.]

Sexual dimorphism.—Males appear to differ from females only in the number of subcaudal shields of which males have the greater number. Several characters are compared between sexes in Table 4. Because of the apparent absence of inter-island variation, data for all samples [including those of Taylor (1922a) 215] have been combined.

Inter-island variation.—I can find no differences between the single specimen from Negros Island and those from Luzon. The measurements and counts of specimens from Mindoro given by Taylor [(1922a) 215] and Sibuyan fall within the known range of variation of the Luzon population.

Ecological notes.—This species is known to be arboreal and feeds upon small lizards [Taylor (1922a) 215]. A skink (*Leiolopisma* sp.) was removed from the stomach of one individual examined here.

All specimens collected to date have been taken at localities at or near sea level. No further information regarding the vertical distribution of this species is available.

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