DESCRIPTIONS OF SEVEN NEW FORMS OF JAPANESE AND COREAN PICIDAE.

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DR. LEONHARD STEJNEGER was the first ornithologist to review the Japanese Woodpeckers (Proc. U. S. Nat. Mus. pp. 99–124, 1886). After his paper we have no other review of these birds except some catalogues or manuals containing descriptions of the species, such as those by Edward Hargitt (Cat. Birds Brit. Mus., Vol. 18, 1890), H. E. Dresser (Man. Palaearct. Bds., Part I, pp. 437–456, 1902), and Dr. Ernst Hartert (Vog. palaearct. Fauna, Vol. 2, pp. 888–941, 1912). Mr. Seinosuke Uchida (Nihon Chorui Zusetsu, Vol. 2, pp. 357–372, 1914, and suppl. pp. 182–185, 1915) also mentions the species of Japanese woodpeckers and makes some remarks upon them. In the present paper are presented descriptions of seven apparently new forms of the family from Japan and Corea.

I beg to tender my sincere thanks to Dr. Leonhard Stejneger and the Associate Curator of Birds in the U. S. National Museum who kindly permitted the examination of the paratype of *Dryobates leucotos subcirris.*

Dryoscopus martius morii subsp. nov.

Diagnosis.—Similar to *D. martius silvifragus* Riley. from Hokkaido and Sakhalin Islands, but distinguished from it by the thicker bill, by the broader base of the upper mandible, by the ridge of the lower mandible being mostly white instead of dark colored and distinct to the base though not sharply defined, and by the culminal ridge being more distinct. The shape of the bill, moreover, especially the lower view of the lower mandible is very different, being less abruptly pointed in the new form. In dry skins the light parts of both mandibles are horn-color tinged with olive, instead of pinkish, as in specimens of *D. m. silvifragus* before me. From *D. m. martius* the new form differs in its larger size, especially the longer wing, while it differs from *D. m. reichenowi* in having the wing distinctly shorter.

The type specimen is from Gunpojo, Keiki District, Central Corea Adult male, November, 1913. No. 1342 Coll. N. Kuroda. It was presented to me by Mr. Tamezo Mori of the Seoul Higher Common School, in honor of whom I have proposed the subspecific name.

Habitat.—Probably confined to the Corean Peninsula.

Measurements.—Five males from Corea, including the type: wing, 245 (243–346 mm.); tail, 168 (165–174); tarsus, 35 (34–37); outer anterior toe, 25 (24–25); outer posterior toe 23 (22–23.5); inner anterior toe, 18.5 (18–19); inner posterior toe, 11 (10–12); culmen, 65.1 (63–67.5); width of upper mandible at base, 22 (22–22.5). No females have been examined.

Type: wing, 246 mm.; tail, 165; tarsus, 35.5; outer anterior toe, 25; outer posterior toe, 22; inner anterior toe, 18.5; inner posterior toe, 10; culmen, 63; width of upper mandible at base, 22.5.

Picus awokera takatsukasae subsp. nov.

Diagnosis.—Resembles *P. awokera horii* Takatsukasa, of Kiusiu and Shikoku but distinguished by the much darker general coloration and less of the green tinge; by the wing-coverts being deeper in color and less bright; by the dark yellowish olive instead of bright yellow under tail-coverts; and by the under parts being tinged with gray instead of olive green. Head, sides of neck and face also distinctly darker.

The type specimen is from Anno, Tanegashima, one of the largest islands of southern Kiusiu. Adult female, January 4, 1920, collected by Mr. T. Yasaka. No. 5298 Coll. N. Kuroda. The subspecific name is given in honor of Prince N. Takatsukasa, President of the Ornithological Society of Japan.

Habitat.—Probably confined to the island of Tanegashima, southern Kiusiu.

Measurements.—Wing, 135 mm.; tail, 94.5; tarsus, 24; outer anterior toe, 21.5; outer posterior toe, 18.5; inner anterior toe, 15; inner posterior toe, 7.5; culmen, 33.5; width of upper mandible at base, 11.5.

Mr. Ogawa examined two specimens from Tanegashima, taken in November and December, and wrote as follows: "Both quite identical with Hondo specimens" (Annot. Zool. Japon. V., p. 202, 1905). This identification is, however, probably in error as the Hondo form (*P. a. awokera*) is much paler than that from Kiusiu (*P. a. horii*) while the present race is the darkest of all.

Yungipicus kizuki matsudairai subsp. nov.

Diagnosis.—Very similar to *Y. k. kizuki* of Kiusiu, but the wing averages longer, 81–88.5 mm. in the present form instead of 79–83.5 mm. in *kizuki*, while the upper mandible is rather broader at the base, 7.5 mm., instead of 6–7 mm.

The type specimen is from Miyakeshima, one of the seven islands of Izu, Japan. Adult male February 15, 1918, collected by Y. Iwaya. Coll. N. Kuroda, No. 3160. The subspecific name is in honor of Viscount Y. Matsudaira who kindly loaned me his series of specimens from Miyakeshima.

Habitat.—Confined to the Seven Islands (Miyakeshima) of Izu, Japan.

Measurements.—Four males: wing, 81–83 mm.; tail, 47–48.5; tarsus, 14.5–15; outer anterior toe, 10–11; outer posterior toe, 12–13; inner anterior toe, 8.5–9.5; inner posterior toe, 5–6; culmen, 16.5–17; width of upper mandible at base, 7.57.

Five females: wing, 85–88.5 mm.; tail, 47.5–50.5; tarsus, 15; outer anterior toe, 11–11.5; outer posterior toe, 13–13.5; inner anterior toe, 9–9.5; inner posterior toe, 5.5–6; culmen, 16.5–17; width of upper mandible at base, 7.5.

Type: wing, 82.5; tail, 47; tarsus, 15; outer anterior toe, 10; outer posterior toe, 12.5; inner anterior toe, 8.5; inner posterior toe, 5; culmen, 17; width of upper mandible at base, 7.5.

I have examined nine specimens of this subspecies and the characters mentioned above are constant. Dr. Hartert also found that two specimens from the same island had the wing longer than typical *kizuki* and wrote as follows: "Zwei Exemplare von Mijakeschima (Sieben-Inseln) scheinen auch zu dieser Form (*kizuki*) zu gehoren, Obwohl die Flugel 83 (♂) und 87 mm. (♀) messen. (Grossere Masse finden sich bei diesen Formen oft, aber nicht durchweg, bei den Weibchen)." (Vogel. Palaearct. Faun., 2. p. 928.)

Dryobates major hondoensis subsp. nov.

Diagnosis.—Resembles *D. major japonicus*, from Hokkaido and rarely north Hondo, but differs in the under parts averaging deeper buffy or brown, never nearly pure white; the ear-coverts are also almost always tinged with light brown, the white scapulars are more or less tinged with buffy as is also the frontal patch while the white spots on the wings are smaller. From *D. m. tschkerskii* it differs in having the under parts distinctly darker and the upper mandible narrower at the base—9.5–11 mm. instead of 12–12.5 mm.

The type specimen is from Minami-azumi-gori, Prov. Shinano, central Hondo. Adult male collected by T. Takayama, January, 1920, No. 4927, colln. N. Kuroda. It is a specimen in the dark phase of plumage.

Habitat.—Hondo, Japan, extending from northernmost Hondo to the central parts (Prov. Suruga). I have not seen specimens from south of Prov. Suruga. This form is no doubt a palaearctic bird and does not range so far south as the next species (*D. leucotis* group). It breeds on Norikura and Takenoshita, Prov. Suruga. One specimen from Corea agrees perfectly in color with the Hondo form but five others from that country are typical *japonicus* in every respect, so that the occurrence of *hondoensis* in Corea is still questionable. The type locality of *japonicus*

was designated by Dr. Stejneger as Yesso (= Hokkaido). It rarely visits northern Hondo.

Measurements.—Twenty-two males: (Hondo) wing 124–135.5 mm.; tail, 77–85.5; tarsus 20–22.5; outer anterior toe, 14.5–16; outer posterior toe, 16.5–18; inner anterior toe, 11.5–13; inner posterior toe, 6–8; culmen, 28.5–32; width of upper mandible at base, 9.5–11.

Twenty-three females: (Hondo) wing, 124–134; tail, 76.5–90; tarsus, 20–22.5; outer anterior toe, 14.5–16; outer posterior toe, 16–18.5; inner anterior toe, 11.5–13; inner posterior toe, 7–8; culmen, 27.5–30.5; width of upper mandible at base, 9.5–11.

Female from Corea: wing, 128.5; tail, 83; tarsus, 21; outer anterior toe, 15; outer posterior toe, 17; inner anterior toe, 12; inner posterior toe, 7; culmen, 31; width of upper mandible at base 11.

Type: wing, 129 mm.; tail, 85.5; tarsus, 20; outer anterior toe, 15; outer posterior toe, 17; inner anterior toe, 11.5; inner posterior toe, 7; culmen, 31, width of upper mandible at base, 10.

Dr. Stejneger considered this dark phase to be identical with "*Dryobates gouldii* (Malh?) Gray" (Proc. U. S. Nat. Museum, 1886, p. 112). This statement is however in error. The Hondo bird has white scapulars as in true *japonicus* and *tscherskii* and not wholly black as in *cabanisi* (= *gouldii*). He however mentions the question of the occurrence and validity of the so-called *D. gouldii* from Japan (Proc. U. S. Nat. Mus., 1892, pp. 299–300). He also states that the Tokyo specimen has all the white portions strongly washed with deep ferruginous, evidently a superficial stain (op. cit., 1893, p. 630). I have examined forty-five specimens from many parts of Hondo with the following result:

(a) In the Hondo specimens (*hondoensis*) all adults, the under parts vary from pale to very dark and the birds are divisible into three phases: a pale one represented by seven examples; a medium one with fourteen examples and a dark one to which eighteen are referrable. The typical *japonicus* from Hakkaido is distinctly paler than even the pale phase of *hondoensis*.

(b) The bars on the outermost tail feathers vary from very distinct and broad to very narrow while extreme examples have them broken up into spots. A specimen from Wakayagi, Prefect Miyagi, Hondo, has only one spot on the outer web of the outermost tail feathers. I am therefore inclined to think that the shape and number of bars on the outer tail feathers of this form

have no value in systematic study, being subject to individual variation.

Dryobates leucotis stejenegeri subsp. nov.

Diagnosis.—Very similar to the deeper colored phase of *D. leucotis subcirris* from Hakkaido, but distinguished by the white of the back and under surface being always more strongly washed with buff. The white spots on the wing are constantly smaller while the wing is shorter and the red on the abdomen much deeper. It differs essentially from the paler colored phase of *subcirris* from Hakkaido.

The type specimen is from Minami-azumi-gori, Prov. Shinano, central Hondo. Adult male, collected by T. Takayama, November, 1918. No. 4931, colln. N. Kuroda. Named in honor of Dr. L. Stejneger.

Habitat.—Apparently confined to northern and central Hondo (Nagano, Nikko, etc.). It breeds in trees at Nikko and Hida. South of Yokohama, on the Pacific side of Hondo there are two other forms.

Measurements.—Six males: wing, 149–152.5 mm.; tail, 84–95; tarsus, 25–26.5; outer anterior toe, 16.5–19.5; outer posterior toe, 20–22.5; inner anterior toe, 13.5–16.5; inner posterior toe, 7.5–9; culmen, 42–42.5; width of upper mandible at base, 13.5–14.5.

Four females: wing, 141–151; tail, 84–92; tarsus, 25–27; outer anterior toe, 17.5–20; outer posterior toe, 20.5–22; inner anterior toe, 14–15.5; inner posterior toe, 8.5–10; culmen, 40; width of upper mandible at base, 12.5–14.5.

Type specimen: wing, 152.5; tail, 95; tarsus, 25; outer anterior toe, 18.5; outer posterior toe, 21.5; inner anterior toe, 15; inner posterior toe, 9; culmen, 42; width of upper mandible at base, 14.

I have compared ten specimens from the central and northern parts of Hondo with fifteen of the true *subcirris* from Hakkaido with the following results.

(a) Only one form (*subcirris*) occurs in Hokkaido but there are two color phases. One of these has the paler under parts almost as white as in *uralensis* but its proportions are larger. The other has the under parts somewhat tinged with buffy as stated by Dr. Stejneger. (Proc. U. S. Nat. Museum, 1886, pp. 113–115.)

(b) Thanks to Dr. Stejneger I have had the opportunity of examining the paratype of *D. l. subcirris* from Sapporo, obtained by Blakiston, October 12, 1882, No. 96001, colln. U. S. N. M., adult female). Dr. Stejneger's description of the type (op. cit. 1886, p. 113) agrees well with this paratype but differs somewhat from other Hakkaido specimens before me though among the latter I find some similar in color to the one that Stejneger de-

scribed. These birds are however practically differentiated from Hondo examples by the decidedly larger white area on the lower back and by the decidedly larger white spots on the wing, larger even than in some of the buff tinted specimens. Stejneger's type specimen must be separated from the Hondo birds and it apparently belongs to the deeper colored phase of the Hokkaido form. The Hondo bird never occurs in Hokkaido.

(c) The white area on the lower back and rump in true *subcirris* is subject to variation, being larger in full plumaged winter specimens and smaller in those taken in summer, just after the molt, or in autumn when the feathers have not attained their full growth. The black lower back (tergum) is covered with white feathers but the amount of white here and on the rump is variable being apparently more developed in Hokkaido examples as mentioned by Dr. Stejneger.

(d) There are no doubt two phases of *stejnegeri*, the Hondo form. One of these is darker colored and the other paler and much nearer to the Hokkaido race, though the white on the back is much restricted and does not extend to the upper back while the white spots are usually smaller and the ear-coverts always tinged with light brown.

(e) The greater wing-coverts in *stejnegeri* have the white spots on the outer webs shorter than in *subcirris* being 7–9.5 mm. (rarely 11) in the former and 9–12.5 mm. (rarely 14 or 15 mm.) in *subcirris*.

(f) The pale spots on the third pair of tail-feathers are very much smaller in *stejnegeri* than in *subcirris* as Mr. Uchida has pointed out (Nihon Chorui Zusetsu, Vol. 2, p. 363) and the variation in the size of these spots is not so great.

Dryobates leucotis intermedius subsp. nov.

"1913. An intermediate form between *Picus leuconotus subcirris* (Stejneger) and *Picus namiyei* (Stejneger)," Kuroda, (Dobutsugaku Zasshi, 1913, p. 333) from Dorogawa, Prov. Yamato, Hondo.

Diagnosis.—Near to *D. leucotis namiyei*, but with the pale area on the back larger, the white spots on the greater wing-coverts larger and three in number instead of two (or entirely lacking); the streaks on the chest and breast fewer in number and the ear patch and lateral neck patch us-

ually continuous above or only partly separated by a black line. Differs from *D. l. stejnegeri* in having the pale area on the back smaller, the white wing spots especially on the coverts smaller and the red of the under parts deeper and extending farther forward.

The type specimen is from Dorogawa, Prov. Yamato, Hondo. Adult female obtained by Mr. N. Teraoka, January 4, 1913. No. 948 colln N. Kuroda.

Habitat.—This intermediate form inhabits the Pacific side of Hondo from Prov. Sagami and Suruga to Prov. Yamashiro, Kii and Yamato as well as Prov. Iyo Shikoku where *D. l. namiyei* also occurs. The specimens from Yamashiro are on the average whiter than those from Yamato and Kii, while an example from Sagami is paler than two from Suruga. This race is no doubt a climatic form and not a hybrid between *stejnegeri* and *namiyei* as considered by Viscount Matsudaira.

Measurements.—Five males (Yamashiro): wing, 147–155; tail, 90–96.5; tarsus, 24–26; outer anterior toe, 17.5–20; outer posterior toe, 20.5–21.5; inner anterior toe, 14–16; inner posterior toe, 8.5–9.5; culmen, 39–42; width of upper mandible at base, 13–14.

Four females (Yamashiro): wing, 140–148.5; tail, 89–91.5; tarsus, 23–23.5; outer anterior toe, 18–20; outer posterior toe, 20–22.5; inner anterior toe, 14–16; inner posterior toe, 7.5–9; culmen, 38.5–42; width of upper mandible at base, 13.5–14.

Type (Yamato): wing, 151; tail, 93; tarsus, 23; outer anterior toe, 17.5; outer posterior toe, 21.5; inner anterior toe, 13.5; inner posterior toe, 8; culmen, 40; width of upper mandible at base, 14.

An examination of seventeen specimens, ten of which were kindly loaned to me by Viscount Matsudaira, yields the following results:

(a) The under parts vary from bright carmine to rose color tinged with carmine or even to grayish rosy.

(b) The subapical white spots on the greater wing-coverts vary from almost as large as in *stejnegeri* to very small as in *namiyei*. The spots on the greater wing-coverts are usually three but on some feathers four, one spot being in that case nearly obsolete.

(c) The white area on the lower back varies considerably in size, the buff tinge being always more or less noticeable. In the type the white back is distinctly tinged with buff while the lower parts are washed with rosy.

(d) The ear-coverts are always tinged with light brown though the color varies somewhat in depth.

Jynx torquilla hokkaidi subsp. nov.

Diagnosis.—Very similar to *J. t. japonica* from Hondo and southward, but differs in the bill being rather longer and higher at the nostril and not so flattened; the distance between the lower edge of the nostril and the cutting edge of the upper mandible is broader, measuring 3 mm. instead of 1.5–2 mm. in *japonica*. In size it is indistinguishable from the latter form. The type specimen is from Yubetsu, Prov. Kitami, Hokkaido. Adult male, collected by Mr. N. Teraoka. No. 568 colln. N. Kuroda.

Habitat.—Island of Hokkaido where it certainly breeds. Stejneger also mentions that the Wryneck breeds in Yesso. A specimen from Sakhalin examined by me belongs to the Hondo form (*japonica*).

Measurements.—Male (type): wing, 79 mm.; tail, 64; tarsus, 18.5; outer anterior toe, 16.5; culmen, 18.5; depth of bill at nostril, 7.

Female: wing, 79 mm.; tail, 62; tarsus, 19.5; outer anterior toe, 17.5; culmen, 20; depth of bill at nostril, 7.

I have examined a pair of adults and a young fledgling from Kitami, Hokkaido. It would seem that a kind of dichromatism is found in this bird as pointed out by Dr. Stejneger (Proc. U. S. Nat. Museum, 1892, p. 296). My specimens belong to the paler phase.

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NOTES FROM CONNECTICUT.

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SINCE 'The Birds of Connecticut' was published in 1913 additional specimens have been taken of several of the rarer species; others have been found on earlier or later dates; and a number of species or subspecies taken that were then unknown in the State; all of which it seems advisable to put on record. The specimens collected are in my collection, when not otherwise stated, and were found by myself, when no collector is mentioned. The Glaucous Gull, European Widgeon, Labrador Horned Owl, Say's Phoebe, and Prairie Marsh Wren are new records for Connecticut; and the Boreal Flicker, Nova Scotia Song Sparrow and Newfoundland