## **NUTHATCHES**

## Family SITTIDÆ

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OF the three nuthatches that occur in the Malay Peninsula two are commonly found on the mountains, while one is strictly confined to the higher hills; they may be discriminated by the following key.

### KEY TO THE MALAYAN SPECIES OF NUTHATCHES

# Dendrophila azurea expectata

#### The Deep Blue Nuthatch

Callisitta azurea expectata, Hartert, Bull. Brit. Orn. Club, xxxv., 1914, p. 34 (Fraser's Hill, Pahang, 4000 ft.).

Sitta azurea, Less., Gadow, Cat. Birds, Brit. Mus., viii., 1883, p. 357; Hartert, Nov. Zool., ix., 1902, p. 573.

Dendrophila azurea, Sharpe, P.Z.S., 1887, p. 441; Ogilvie-Grant, Journ. Fed. Malay States Mus., iii., 1908, p. 21.

**Description.**—Adult.—Sexes alike. Head, including sides of the head, ear coverts and nape, glossy black, the feathers of the latter thick and velvety, forming a kind of pad; mantle, back and rump, dark purplish mauve, becoming peacock-blue on the upper tail coverts, the feathers of the mantle with narrow whitish streaks on the middle of the shaft. Lesser upper wing coverts on inner edge of wing, black, the median and greater series, grey-blue, with black edging all round. Primary coverts almost black, with narrow darker blue edges. Primaries, black, with narrow grey-blue edging, becoming broader on the inner ones towards the tip but leaving a truncated black tip;

secondaries with the outer webs grey-blue, bordered towards the tips by black; scapulars mainly black, with elongate blue centres. Inner aspect of wing, dark grey, the quills narrowly edged with pale grey on their inner webs and with a patch of white at the base, under wing coverts, black, axillaries, black, tipped and edged with white. Centre tail feathers, pale grey-blue, tipped with black; remainder, bluish black, broadly tipped and edged with grey-blue, the outermost with an additional black tip. Beneath, with the chin, throat and breast, white, generally with a slight fulvous tinge; lower abdomen, black, tinged with blue; under tail coverts, greyish blue, rather deeper than that on the secondaries.

*Immature*.—Not materially different from the adult; head, duller and browner black.

**Soft Parts.**—Iris, white, cream-coloured or greenish yellow; orbital skin, livid bluish or greenish white, or very pale bluish cream-colour; bill, livid bluish horn, black at the tip; feet, similar, sometimes more bluish, sometimes tinged with green; claws, black.

**Dimensions.**—Total length, 4.7 to 5 in.; wing, 3 to 3.3 in.; tail, 1.5 to 1.8 in.; tarsus, 0.6 to 0.7 in.; bill from gape, 0.75 in.; culmen, 0.6 in.

Range in the Malay Peninsula.—From North Perak to South Selangor and in Pahang

**Extralimital Range.**—Sumatra. The species, as a whole, is a very distinct one, not closely allied to any other nuthatch. The typical form has been restricted to East Java. Another slightly different one, *D. a. nigriventer*, is found in the west of that island.

Habits.—This nuthatch occurs sparingly on all the high mountains of the Peninsula, both on the main range, on the Larut Hills, and on Gunong Benom and Gunong Tahan in Pahang. It is rarely found at below about 4000 ft., and never below 3000 ft. It frequents gullies and ridges, especially where there is much dead standing timber, and travels in parties, often of considerable size. In Sumatra, at over 7000 ft., I have seen more than a dozen busy excavating a tall dead tree, apparently investigating larger holes made by woodpeckers, as well as making others on their own account. Flight is laboured and not swift, though the birds are continually on the wing from one tree to another. Food is, of course, insectivorous, mainly caterpillars and beetle grubs, often those of bees and wasps, but ants are also largely eaten and also spiders. The note is a rather grating squeak, low and not specially noticeable.

# Dendrophila frontalis saturation The Malay Velvet-fronted Nuthatch

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This is a more delicately built, less stumpy bird than the preceding, from which, of course, it is at once distinguished by its mauve-blue upper parts, lilac-washed under surface, and vermilion bill. Size, about the same. It is

well distributed over the lower slopes of the mountains, but does not ascend much above 3000 or 3500 ft., and I do not believe that the labels recording altitudes of from 4000 to 7000 ft., on specimens obtained on Gunong Tahan, by John Waterstradt, are correct.

There has been much discussion on the relations between this deep-coloured form with the beautiful lilac flush on the lower parts, and the paler, duller form which occurs in Java and elsewhere, and is not infrequent in the northern parts of the Peninsula. Possibly the forms are not strictly geographical races, but are merely local varieties, dependent solely on their immediate surroundings, those inhabiting more open and drier country being the paler D. f. frontalis, while only a mile or two away, in damp forest, the brilliant D. f. saturatior may be the dominant form. The subject is an interesting one for study; precise and detailed observations accompanied by specimens are much desired.