

DUCKS AND GEESE

Order ANSERIFORMES

Vol. I., p. 51.

FOR practical purposes the order to which ducks and geese belong, apart from a South American group, the screamers (*Palamedeidae*), with which we are not concerned, can be distinguished from all other birds, except certain petrels, by the laminated edges of the bill. The flamingoes, which are found in India, but not in Malaya, belong to the order but are differentiated by their very long legs, their bill abruptly bent in the middle almost to a right angle, and by their rosy plumage.

No geese or swans or any of the sea-ducks or mergansers have ever occurred, even as wanderers, in the Malay Peninsula.

The order is very poorly represented in Malaya. In addition to the species treated in detail below, the following ducks deserve a passing mention.

The ruddy sheldrake or Brahminy duck (*Casarca ferruginea*)¹ may possibly occur in the extreme north of the Peninsula. It has been seen by Davison in the Mergui Archipelago.

The tufted duck (*Nyroca fuligula fuligula*)² was once included in the Malayan list on the strength of a specimen supposed to have been obtained at Temerloh in Pahang, but it was afterwards definitely established that the bird was bought there as a skin. There is, therefore, no proof that it was actually shot in the neighbourhood.

Another record only worthy of mention concerns the Baikal teal (*Nettion formosum*). In 1913 Robinson's Malay assistant, on a visit to his home on the Bruas river in the Dindings territory, north of the mouth of the Perak river, bought from a local Malay two pairs of the Baikal teal. The original owner stated that he had caught them as ducklings in the river with a casting net (*jala*), but it is more than probable that they were the offspring of a domesticated pair.

¹ Mainly bright chestnut. Head, buff; black neck-ring. Rump and tail, black. Wing coverts, white; speculum green; primaries black. Female: without black collar; paler; wing about 13.5 inches.

² Crested. Head, neck and upper parts, black; breast also black, sharply defined against white of abdomen. Wing coverts, dark brown; speculum, white. Female: forehead, white. Head, upper parts and breast, brown, becoming white on lower under parts. Wing, more or less as in male. Wing, about 8 inches.

KEY TO THE MALAYAN SPECIES OF DUCKS

1	{	Bill short and high ; culmen about	
		1 in.	<i>Nettapus c. coromandelianus</i> , p. 226
2	{	Bill duck-like ; culmen well over	
		1 in.	2
3	{	Wing under 10 in.	3
		Wing over 10 in.	<i>Asarcornis scutulatus</i> , p. 225
4	{	With a speculum in the wing	4
		Without a speculum	<i>Dendrocygna javanica</i> , p. 219
5	{	Bill strongly spatulate ; wing over	
		8.5 in.	<i>Spatula clypeata</i> , p. 223
6	{	Bill not strongly spatulate ; wing	
		under 8.5 in.	5
7	{	A bright green speculum	6
		Speculum not bright green	<i>Anas querquedula</i> (female), p. 222
8	{	Crown bright chestnut	<i>Anas c. crecca</i> (male), p. 221
		Crown streaked brown and buff	<i>Anas c. crecca</i> (female), p. 221
		Crown nearly black	<i>Anas querquedula</i> (male), p. 222

*Dendrocygna javanica***The Whistling Teal or Tree-Duck**

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Anas javanica, Horsfield, *Trans. Linn. Soc.*, xiii., 1821, p. 199 (Java).

Dendrocygna javanica, Kelham, *Ibis*, 1882, p. 197 ; Oates, *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 284 ; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 430 ; Stuart Baker, *Game Birds, India, Burma and Ceylon*, i., 1921, p. 122, pl. 9 ; Herbert, *Journ. Siam. Soc., Nat. Hist. Suppl.*, vi., 1926, p. 355 ; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 411.

Malay Name.—Bĕlibis : pet nam (*Siamese*).

Description.—*Adult.*—Middle of crown and back of head, blackish brown ; forehead, sides of head, a stripe above the eye, neck all round and throat, brownish, becoming paler on the chin ; mantle, upper back and scapulars, blackish, with rufescent tips to the feathers, giving a scaly appearance ; lower back and upper tail coverts, black ; the greatest upper tail coverts, chestnut ; smaller and median wing coverts, maroon-chestnut ; greater coverts, primaries and secondaries, black, becoming brownish on the inner secondaries. Inner aspect of wing, greyish ; axillaries and under wing coverts, glossy black ; tail feathers, brownish black. Beneath, breast greyish brown, becoming rufescent and ultimately chestnut on the belly ; flanks, greyish brown with whitish buff shaft stripes, broadening towards the tips ; under tail coverts, whitish brown.

Immature.—The head not nearly so dark, the upper surface with the transverse rufous edgings to the feathers pale and more indeterminate. Lower surface more uniform rufous brown without any rich chestnut on the belly. Very young birds lack the maroon-chestnut wing coverts.

Soft Parts.—Iris, brown ; orbital ring, greenish yellow, sometimes clear pale chrome ; bill, slate-grey ; tarsi, pale slate-grey ; toes and webs paler.

Dimensions.—Total length, about 16 in. ; wing, 7·3 to 7·7 in. ; tail, 2·5 in. ; tarsus, 1·7 to 1·9 in. ; bill from gape, 2 in.

Range in the Malay Peninsula.—Throughout the length of the Peninsula, Junk Zeylon, the Bandon Bight Islands, the Langkawi group ; recorded from Penang and Singapore.

Extralimital Range.—Throughout the Indian Empire and the Indo-Chinese countries, east to the Liu Kiu Islands and Southern China, Sumatra, Borneo and Java, and probably the Lesser Sunda Islands.

Nidification.—Probably breeds in small numbers in Perak, Pahang and the islands off the Kedah coast, and more abundantly in the north of the Peninsula—the breeding season, according to Kelham and others, being in the latter half of the year. There are, however, no definite records of nests and eggs from the Malay Peninsula. Very young birds have been obtained at Kuala Kangsar in January and February. There are also nestlings in down from Tung Song, Peninsular Siam, dated 5th October, in Mr Herbert's collection now in the British Museum. Herbert gives the following account of the nesting habits in Central Siam, but does not mention the month :

“ The nests are built on tufts of rushes, or coarse grass, or on low scrub bushes, but, so far as I know, the whistling teal around Bangkok never build their nests in trees as they do in many parts of India. The practice of nesting on the ground by this teal is, however, not uncommon in Burma and is fully dealt with by Mr Stuart Baker.

“ The eggs are very spherical ovals, and but little compressed at the small end. The colour is creamy white when first laid, but very soon becomes stained. The surface is very smooth and often there is a fair amount of gloss, which is due to a chalky deposit on the shell. This chalky surface becomes much scratched by the birds when turning the eggs during incubation. Eight is a very general number of eggs for a clutch and I have had as many as ten. One clutch averages 1·74 by 1·42 in., and another, 1·88 by 1·45 in., but I have not sufficient measurements to give a general average, which would, I feel sure, be rather smaller than that for Indian eggs.”

Habits.—The whistling teal is very widely distributed in the Malay Peninsula, very common in the north and in the east coast states but continuously scarcer as we proceed south, due to the lack of suitable country. In North and Central Perak and along the course of the Perak river it was, many years ago, exceedingly common and is still fairly numerous, and the same may be said of Pahang, but in Selangor it is now exceedingly scarce, and in Malacca and Negri Sembilan almost non-existent, though it is doubtful if at any time it was really common in any of these states. In the southern part of its range it is largely migratory, being much more abundant in the early months of the year.

As regards its habits, it frequents, for choice, stretches of water of comparatively limited extent, pools and lakelets by the edge of the ricefields, the ricefields themselves when flooded, and the backwaters of the larger rivers,

where it is found in small flocks, though in Langkawi and at Bandon at the end of June Robinson saw large numbers. The birds fly well and strongly, though, of course, at nothing like the pace of a mallard; they are also good divers, but do not swim very fast. At night they roost on high trees surrounding the ricefields, and along the rivers, but probably feed, at least during part of the night, as their whistling note is then often heard in localities in which they are common.

The food is soft water-weeds and grass, and even, it is said, the young rice-plants, but also water-snails, often of considerable size.

The note is a soft low whistle, often uttered, both when feeding and on the wing, but we have not yet heard the chuckle or quack which is referred to by Baker.

Anas crecca crecca

The Common Teal

Anas crecca, Linn., *Syst. Nat.*, 10th ed., 1758, p. 125 (Sweden).

Nettion crecca, Salvadori, *Cat. Birds, Brit. Mus.*, xxvii., 1895, p. 243; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 443; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 169.

Nettion crecca crecca, Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 431.

Malay Name.—Unrecorded.

Description.—*Adult male.*—Head and neck, chestnut, a metallic green patch on each side of the head, bordered by a thin whitish line; chin, blackish; back, short scapulars and flanks, narrowly barred black and white; upper tail coverts, black, with pale edges; tail and wing quills, greyish brown, outer secondaries, black, with white tips; "speculum," bright metallic green; a black-and-white patch on the long inner secondaries; greater secondary coverts, buffy white to pale cinnamon, other coverts, grey; breast, dirty-white, spotted with black; abdomen, white; under tail coverts, black in the middle, buff at the sides.

Towards the end of, or after, the breeding season the male assumes a dress ("eclipse plumage") more or less like that of the female.

Adult female.—Top of head, hind neck, mantle, scapulars, wing quills, except the secondaries, and tail, dark brown; top of head freckled with buff. The mantle scaly in appearance because of crescent-shaped pale rufous buff or brown markings; feathers of lower back and rump broadly edged with whitish grey. Scapulars and tertials also with pale edges. Lesser and median wing coverts, dark grey, the latter broadly edged with white, which colour forms a broad bar across the wing. Speculum as in the male. Under parts, whitish, sullied with buff and spotted with blackish brown, the spots small on the chin and throat, heavier on the foreneck and upper breast, which is also washed with brown, thereby forming a dark zone, indistinct on the remainder of the breast and abdomen, and longer and larger on the under tail coverts.

Immature.—Very like the female, but the edges of the wing coverts paler.

Soft Parts.—Iris, brown ; bill, black, rather paler, browner or greener in the female ; feet, grey, but variable in tone.

Dimensions.—Total length, about 15 in. ; tail, 3 in. ; wing, about 7 in. in females, up to 7.5 in. in males ; tarsus, 1.25 in. ; bill from gape, 1.6 in. Weight, 12 to 14 oz.

Range in the Malay Peninsula.—There are only two records. A specimen in the British Museum was obtained by Dr Maingay in the territory of Malacca in December 1866. Another female was shot in the vicinity of Kuala Lumpur in April 1912.

Extralimital Range.—Widely distributed throughout Europe and Asia and a straggler to North America ; moves south in winter to Africa, India, etc. In the east it is known from Japan south to the Philippine Islands, but it does not occur in the Sunda Islands. It does not breed in India ; in Burma it is common as a winter visitor, but according to Mr Stuart Baker does not occur south of Pegu. We have specimens from Siam and it is recorded as common in winter throughout French Indo-China.

Nidification.—Not known to nest in the Peninsula nor can it be expected to do so. In Europe the grass down-lined nest is placed on the ground and contains, usually, eight to ten, but sometimes more, cream-coloured eggs.

Habits.—Beyond the bare mention of two local specimens we have nothing to record of this duck ; it must be very rare in the Peninsula, and the specimen from Kuala Lumpur is the southernmost on record.

Elsewhere the teal is known mainly as a fresh-water duck, a surface and night feeder. It flies well, is a good sporting bird and excellent for the table.

Anas querquedula

The Garganey

Anas querquedula, Linn., *Syst. Nat.*, 10th ed., 1758, p. 126 (Sweden).

Querquedula circia, Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 291 ; Salvadori, *Cat. Birds, Brit. Mus.*, xxvii., 1895, p. 293 ; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 449.

Querquedula querquedula, Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 175 ; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v. 1921, p. 83 ; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 439.

Malay Name.—Unrecorded.

Description.—*Adult male.*—Top of the head, blackish brown, a white stripe above and behind the eye ; head, rufous brown with fine white stripes ; chin, black. Upper parts, dark brown, the feathers with pale whitish buff or greyish edges. Scapulars, black, with white shaft stripes, the outer feathers mixed with grey. Lesser and median coverts, pale bluish grey, the median series broadly tipped with white, forming a white bar across the wing. Primaries, brown ; secondaries, green (the "speculum") tipped with white ; tertials, dark brown, narrowly edged with white. Feathers of foreneck and breast, barred alternately with crescentic bands of black and whitish buff, the coloured

zone ending in a sharp line across the breast. Abdomen white, with fine wavy black bars on the lower abdomen and flanks. Under tail coverts white, spotted with blackish brown. Tail feathers, brown, with narrow white edges.

In "eclipse" plumage the male is like the female, but can be distinguished by its brighter wings.

Adult female.—Upper parts, dark brown, the top of the head mixed with black, the feathers elsewhere with well-defined whitish or pale buff edges. Chin and throat, white, remainder of head and the neck washed with brown closely and finely streaked with blackish; hind neck, greyish brown; a whitish stripe above the eye, a dark streak behind it. Feathers of foreneck and sides of upper breast with whitish centres and broad pale edges. Under parts, white, indistinctly on the flanks and lower abdomen and more distinctly on the under tail coverts spotted with blackish brown. Wing much duller than in the male, the speculum only faintly green in certain lights and scarcely noticeable.

Immature.—Very like the female.

Soft Parts.—Iris, brown; bill, blackish brown, paler on the lower mandible; feet, brownish to greenish grey.

Dimensions.—Total length, about 16 in.; tail, 3 in.; wing, 7.5 to 8 in.; tarsus, 1.2 in.; bill from gape, 1.75 in. Females run rather smaller; wing usually about 7 to 7.25 in.

Range in the Malay Peninsula.—Only known from a few birds shot in Perak. One of us has examined a mounted specimen said to have been shot near Singapore by a Chinese sportsman, but the record is a little dubious.

Extralimital Range.—Across Europe and Asia to Japan; also known from North America. South in winter to Africa, India, Siam, French Indo-China, Malaysia, the Philippines and Celebes, to New Guinea and Australia. It seems to be common in Tenasserim and French Indo-China, but rather less so in Siam.

Nidification.—In Europe the nest is made on the ground among vegetation, usually near swampy ground or water, but sometimes in heather. The number of cream-coloured eggs varies, but is usually about eight.

Habits.—The garganey is occasionally met with on the Perak river but it is rare, and we have nothing special to record of its habits in the Peninsula. In winter it is very common in India, and Oates described it as the commonest duck in Burma. It is a surface feeder, feeding chiefly at night; in habits it is gregarious and sometimes occurs in immense flocks in its winter quarters.

Spatula clypeata

The Shoveller

Anas clypeata, Linn., *Syst. Nat.*, 10th ed., 1758, p. 124 (Sweden).

Spatula clypeata, Salvadori, *Cat. Birds, Brit. Mus.*, xxvii., 1895, p. 306; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 542; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 177; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 442.

Malay Name.—Unrecorded.

Description.—*Adult male.*—"Head and upper neck glossy green; lower neck, except behind, and upper breast, sides of the breast and shorter scapulars, pure white; hind neck and back, dark brown, the feathers pale-edged; rump and upper tail coverts, black, glossed with green; tail, dark brown, the outer feathers broadly edged with white; wing coverts and outer webs of two of the longer scapulars, bluish grey, remainder of long scapulars, black, all with broad white shaft stripes; quills, brown; speculum formed by outer webs of secondaries, bright green, bordered in front by a bar of white formed by the larger coverts; tertiaries, blackish, slightly glossed with green, each with a fusiform white, or whitish, stripe along the shafts; lower breast and abdomen, chestnut; some of the feathers of the flanks and about the vent finely barred with buff; lower flanks, white; under tail coverts, black, glossed with green" (*Blanford*).

The "eclipse" plumage of the male closely resembles that of the female, but the characteristic wings of the male are retained.

Adult female.—"Brown above, each feather with a pale reddish border; the feathers of the back and rump, the scapulars and upper tail coverts with concentric buff or rufous bands; wing coverts grey to greyish brown; speculum on secondaries duller than in male; lower parts brownish buff, more rufous on abdomen, speckled with dark brown on foreneck; feathers of upper breast and of flanks distinctly, lower abdomen and lower tail coverts less strongly marked with crescentic brown bars" (*Blanford*).

Immature.—Young males are very like the females, but have brighter wings.

Soft Parts.—"Bill in males in full plumage, black; in females and young, upper mandible, dark brown, lower mandible, dull orange; irides, yellow or orange in the male, brown in female; legs, orange to red" (*Blanford after Hume*).

Dimensions.—*Male.*—Length, 20 in.; tail, 3.25 in.; wing, 9.5 in.; tarsus, 1.4 in.; bill from gape, 3 in.

Female.—A little smaller; wing, 8.75 in.; the bill is shorter, measuring from gape, 2.75 in. (*from Blanford*).

Range in the Malay Peninsula.—A male in the Selangor Museum was killed near Kuala Lumpur, in Selangor, in 1896. Another specimen in the same collection is supposed to have been collected many years ago on the Bernam river in the same state, but there is a slight doubt about its provenance. We have seen a mounted bird in private possession in Singapore; its history is not certain, but it was probably killed on the island.

Extralimital Range.—Europe, across Asia to the Sandwich Islands and North America. South to Africa, India, the Philippines, Borneo and New Guinea (*Mathews*). It occurs in Burma, but has not been recorded from Tenasserim. In Siam it seems to be rare; from French Indo-China it is reported in small numbers in winter.

Nidification.—The shoveller is known to have bred in Ceylon, but not in India or Malaysia. "The nest is usually on dry ground, among heather, or tufts of sedge in rushy meadows, and is made of fine grass, with a lining of grey, white-tipped down, plucked by the female from her body after she begins to sit. The eggs, eight to fourteen in number, are of a pale greenish buff colour" (*Manual of British Birds*, 3rd ed., 1927).

Habits.—According to Mr Stuart Baker, the shoveller is a late arrival in India, not appearing in any numbers until about the end of October ; it also leaves late, many birds staying till April. It is essentially a bird of fresh, shallow waters, rarely diving. It is omnivorous and often found on very dirty and polluted water ; it is usually considered a poor bird for the table.

Asarcornis scutulatus

The White-winged Wood-Duck

Anas scutulata, S. Müller, *Verh. Nat. Land-en Volk.*, 1842, p. 159 (Java).

Anas leucoptera, Oates in Hume's *Nests and Eggs Ind. Birds* (2nd ed), iii., 1890, p. 287.

Asarcornis scutulatus, Salvad., *Cat. Birds, Brit. Mus.*, xxvii., 1895, p. 60 ; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 424 ; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed.), vi., 1929, p. 387.

Asarcornis scutulata leucoptera, Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 82.

Malay Name.—Unrecorded.

Description.—Sexes much alike. Head and the neck for the greater part of its length, white, heavily spotted or mottled with black. Lower hind neck, mantle, back and rump, black, highly glossed with peacock-green ; scapulars and tertials, brownish black, glossed with a darker, oily, bottle-green. Lower foreneck and upper breast, glossy black, faintly bluish ; remainder of under parts, dull brownish black, the fringes of the feathers glossy ; a green metallic wash on the flanks and a few feathers, perhaps old, on the sides of the body, partly dull chestnut. Lesser and median coverts, pure white ; exposed part of major coverts, glossy black. Primaries and tail, blackish brown ; secondaries, bluish grey (the "speculum") ; the outermost tertial, glossy green-brown, largely white and margined with black on the outer web ; the next feather with a large white spot on the outer web. (The general appearance of the closed wing is therefore striking and distinctive. The entirely white fore part of the wing is separated by a broad black band from the other, terminal half, which is boldly patterned longitudinally, starting on its outer edge, bluish grey, black, white and glossy green-brown.) Axillaries, white ; under wing coverts, largely white.

Note.—Sometimes the lower breast and abdomen are *chestnut* (in faded and immature specimens merely rich brown) ; in other birds the under parts are mixed, black and brown or chestnut. When the under parts are not entirely black, the lower neck all round and the upper breast are usually glossy black, thus forming a ring round the neck. In worn plumage the upper parts are much duller, less blackened, especially on the mantle, and therefore much more uniform.

Our local series of this duck is very variable in colour, but too small for us to determine with precision the parts played by individual variation and other factors in the range of colour shown. It seems clear, however, that, contrary to the views of some authors, the newly moulted fully adult bird is at least sometimes almost uniformly glossy black below.

Soft Parts.—"The bill varies from lemon-yellow to deep orange; the base and tip, black, and with black mottlings everywhere, generally least numerous about the centre of the bill; gonys paler, as a rule, than the rest of the bill. During the breeding season the base of the maxilla becomes considerably swollen, though it never becomes an actual comb, while the orange-colour deepens to deep orange-red or light red. The legs and feet vary, like the bill, from lemon-yellow to a dull orange. The joints, toes and webs are almost invariably mottled with dull greenish, and patches of the same colour are to be found on the tarsus itself. The toes are always dark. Irides, brown or blood-red in old birds" (*Stuart Baker*).

Dimensions.—Total length, 28 to 31 in.; tail, 6.5 to 7 in.; wing, 14 to 15 in.; tarsus, 2.5 in.; bill from gape, 2.75 to 3 in.

Range in the Malay Peninsula.—From Peninsular Siam south to the Kinta district of Perak, but very rare in that portion of the Peninsula under British influence.

Extralimital Range.—Assam, Burma and Tenasserim, Siam, French Indo-China from northern Annam to Cochin-China. Java and Sumatra. The status of birds from the Sunda Islands is uncertain. Specimens in the Raffles Museum from Korinchi, Sumatra, seem to be domesticated hybrids, but free-flying birds certainly occur in Sumatra, although we cannot say if in colour they show signs of domestication.

Nidification.—Very little definite information is available. The nesting habits appear to be unknown.

Habits.—This duck is common in Peninsular Siam and very abundant in Trang, from which state we have specimens from various districts. The "Skeat Expedition" obtained a specimen at Patelung. At Chong, near the foot of the main dividing range, it is fairly numerous; it used to come down to the partially flooded ricefields to feed in the early morning and late afternoon. For so heavy and solid a bird it is a very powerful flier and capable of carrying off a large dose of lead. In the evening, after feeding, it went off to roost in the patches of jungle growing on small and steep hills rising from the general level of the ricefields. The specimens examined had been feeding on large snails (*Ampullaria*), with which their crops were crammed, together with a few fresh-water mussels. It is fairly common on the ricefields up-country in Bandon and almost down to the coast, generally in pairs, but sometimes in large numbers. In the southern part of its range in Malaya it seems to be very rare, and outside Peninsular Siam it is only known to us by an old and deteriorated mounted specimen in the Selangor Museum, from the vicinity of Ipoh, in Perak.

Nettapus coromandelianus coromandelianus

The Cotton Teal

PLATE 23.

Anas coromandeliana, Gmelin, *Syst. Nat.*, i., 1789, p. 522 (India).

Nettapus coromandelianus, Oates in Hume's *Nests and Eggs Ind. Birds*, (2nd ed.), iii., 1890, p. 280; Salvadori, *Cat. Birds, Brit. Mus.*, xxvii., 1895, p. 68;

Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 433; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 144; Robinson and Kloss, *Journ. Nat. Hist. Soc. Siam*, v., 1921, p. 82; Stuart Baker, *Faun. Brit. Ind., Birds* (2nd ed), vi., 1929, p. 392.

Malay Names.—Burong bēlabas (*Kedah*; A. W. Hamilton); itek ayer.

Description.—*Adult male.*—"Forehead, crown and nape, hare-brown, the former darkest; remainder of the head, the whole neck and lower plumage, pure white; a broad collar round the neck, black in front, glossy green behind; the white of the breast produced round the neck and forming another collar below the black one; under tail coverts dark brown, mottled with white; back, scapulars, rump, tertiaries and wing coverts, deep glossy green or purple; secondaries, glossy green, broadly tipped with white; primaries, dark brown on the basal halves, then white, with the tips black; upper tail coverts, white, freckled with brown; tail, brown; sides of body vermiculated with brown; under wing coverts, greenish black" (*Oates*).

The male seems to pass through an eclipse plumage, which is much like the female plumage, except that the wings remain unaltered. The black breast band is lacking.

Female.—Top of head and a line through the eye, brown; supercilium, remainder of head, neck and under parts, white, freckled with brown on the head, washed and irregularly barred with brown on the hind neck; foreneck and upper breast, washed with brown on the sides of the body and irregularly barred on the flanks and outer under tail coverts. Upper parts, brown, darkest on the lower back and rump; the wings and scapulars washed with dull oily green. Secondaries, broadly tipped with white, the inner primaries more narrowly so. Upper tail coverts, white, freckled with grey-brown.

Immature.—Like the female, but no green wash on the upper parts; under parts browner and more heavily marked. Young males, however, always show the white patch on the primaries.

Soft Parts.—"In the *male* the bill in summer is black; the iris bright red; legs, toes and webs black; the sides of the tarsus and toes, dusky yellow; claws, horny brown. In the winter the upper mandible is brownish and the lower yellowish.

"In the *female* the bill is brown above, yellowish below; the iris is brown, and the legs and toes, greenish yellow" (*Oates*).

Dimensions.—Length, 13 in.; wing, 5.75 to 6.5 in.; tail, 2.5 in.; tarsus, 1 in.; bill from gape, 1 in. *Females* run smaller.

Range in the Malay Peninsula.—From Peninsular Siam to Singapore, but rare in the south.

Extralimital Range.—Ceylon and India to Burma, Siam, French Indo-China to Hainan and China, throughout Malaysia to the Philippine Islands, Celebes and Australia.

Nidification.—Not known to breed in the Malay Peninsula, although Kelham suspected it of nesting in the neighbourhood of Kuala Kangsar, in Perak. He never found a nest, but noticed that during June the birds paired and left the open for more sheltered water. The white eggs, measuring 1.7 by 1.29 in. and about ten in number, but sometimes fewer and sometimes many more, are

usually placed in a hole at a varying height from the ground in a tree standing near water.

Habits.—The cotton teal is said to be common at the north end of the Talé Sap and in the Talé Noi, in Patelung, but in our experience it is now rare everywhere else in the Peninsula. Kelham, who shot numbers in Perak in 1877, found it "exceedingly plentiful" among the swamps of the "mainland," generally in small parties of from four to ten, often in company with the whistling teal. In Kedah, according to Mr A. W. Hamilton, it is found in very small numbers on the meres, either in pairs or small flocks of half a dozen birds. We have specimens from the lowlands of Pahang, and odd birds occasionally turn up on Singapore Island, where, however, it is rare. Kelham's observations, made in Perak, are more detailed than any notes we have. "They seem to prefer open sheets of shallow water to thick cover, but on being disturbed become very shy and retire to quiet creeks or backwaters surrounded by jungle. Though I often found them on flooded meadows, I rarely (in fact, do not think I ever) saw them actually on dry land. Their legs are so short and set so far back that probably they seldom attempt to walk, but on the water are quite at home, swimming and diving exceedingly well, and when wounded are very hard to secure. The birds also have the power of sinking their bodies below the water till nothing but their heads are visible, hoping thus to escape notice. When on the wing the flight of these birds is very rapid. Skimming close over the reeds, they dodge along at a great pace and are far from easy to shoot."