

XVI.—A Review of the Genus *Burhinus*.

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Genus **BURHINUS**.

*Burhinus* Illiger, Prodrömus Mamm. et Av. p. 250 (1811—  
Monotype *Charadrius magnirostris* Lath.).

*Ædienemus* Temminck, Man. d'Orn. p. 321 (1815—Type  
through tautonymy *Charadrius ædienemus* L.).

*Planorhamphus* Billberg, Synops. Faun. Scand. i. 2.  
tab. A (1828).

[*Pedoa* Leach, Syst. Cat. Mamm. & B. Brit. Mus. p. 28  
(1816—Type *Charadrius ædienemus*).]

*Esacus* Lesson, Traité, p. 547 (1831—Type *Esacus recur-  
virostris*).

*Carvanaca* Hodgson, J. A. S. Beng. v. p. 775 (1836—  
Type *Esacus recurvirostris*).

*Pseudops* Hodgson, J. A. S. Beng. x. pt. 1, p. 27 (1841—  
Type *Esacus recurvirostris*).

*Orthorhamphus* Salvad. Ucc. Born. p. 312 (1874—Type  
*Orthorhamphus magnirostris*).

Four different genera of Burhinidæ have been generally recognized—*Ædienemus*, *Burhinus*, *Esacus*, and *Orthorhamphus*, the three latter genera containing only one species. *Ædienemus* was separated from *Burhinus* on account of its shorter tail, a specific and surely not a generic difference. *Esacus recurvirostris* has certainly a very differently shaped bill, but the size of the bill, colour-pattern and the size of the bird are almost identical with those of *Orthorhamphus magnirostris*, and the shape of the bill of the latter is identical with that of the rest of the group, besides which the colour-pattern and type of coloration of the nestling *recurvirostris* and *magnirostris* are identical with those of the

\* By the courtesy of the Editor, the description of species on the British list in this and succeeding articles are abridged from my descriptions in the 'Practical Handbook of British Birds.' The measurements in some cases are also taken from the Handbook.—A. O. M.

other nestlings of the genus. Therefore I amalgamate the genera *Burhinus*, *Ædicnemus*, *Esacus*, and *Orthorhamphus*, and as *Burhinus* is the oldest generic name, it must be used. The amalgamation of these genera necessitates a new specific name for *Orthorhamphus magnirostris magnirostris* to distinguish it from *Burhinus magnirostris magnirostris* of Australia.

The genus *Burhinus* contains nine species and various subspecies; of these two, *ædicnemus* and *senegalensis*, occur in the Palearctic Region, *vermiculatus* and *capensis* are confined to southern, central, and western Africa, *magnirostris* to Australia, *bistriatus* and *superciliaris* to Central and South America, *neglectus* to northern Australia, Malay Archipelago, and New Guinea, *recurvirostris* to India, Ceylon, and Burma.

It is interesting to note that the large-billed *B. neglectus* occurs in northern Australia alongside the smaller-billed *B. magnirostris*, but while the latter breeds in forest or open country, the former is entirely a shore bird.

*B. æ. ædicnemus* in the British Isles affects heaths, chalky hills, shingle banks and uncultivated wastes, while its various subspecies inhabit stony uplands, bare plains, and, occasionally, dry bush country. It is migratory and has five subspecies: two Canary Island forms, *distinctus* and *insularum*, both smaller and resident; a desert form, *saharæ*, apparently resident, with yellowish sand-coloured upper parts, breeding in North Africa and Palestine; a lighter, less sandy yellow, more greyish form, *astutus*, from Turkestan, Persia, and the Indian deserts, and found elsewhere on migration; and a smaller form, *indicus*, resident in India, Ceylon, and Burma.

*B. senegalensis senegalensis* with its much redder upper parts is a typical West African form, and distinct from its greyer subspecies *assimilis* from Egypt, Abyssinia, and Sudan. *B. s. assimilis* frequents the banks of the Nile and other rivers, and the adjoining cultivated land, and in the daytime in Egypt the roofs of houses, where it also nests. In Central Africa *B. v. vermiculatus*, a dweller on the shores and islands of the big lakes or banks of rivers, occurs with one subspecies, *büttikoferi*, in Liberia, which has a larger

bill, and is said to be greyer, not redder, as one would have supposed.

*B. c. capensis* inhabits the stony flats and slopes of the low hills in South and Central Africa, and has five subspecies: *B. c. damarensis* from the South-West African Protectorate (the Angola birds appear to be typical), while *B. c. maculosus*, a brighter and redder bird, is generally distributed from West Africa to Sudan and Abyssinia. *B. c. affinis* has been described from the Abyssinian shores of the Red Sea, Kordofan, Nubia, but though some examples appear to be paler, more isabelline, and with smaller spots, others are indistinguishable from lighter *B. c. maculosus*, and until more material is available from the terra typica, I have placed this subspecies as a synonym of *B. c. maculosus*. *B. c. ehrenbergi*, Dahlak Islands, has not been examined. *B. c. dodsoni*, southern Arabia, is distinguished from *B. c. maculosus* by its paler upper parts with smaller and paler spots.

*B. dominicensis*, West Indies, appears to be nothing more than a subspecies of *Burhinus bistriatus* (Central America and northern South America), from which it is distinguished by its smaller size. *Burhinus bistriatus* is to be found on the grassy savannas, and makes its nest in a small hollow in the ground among the grass.

*B. superciliaris* is confined to Peru, where it inhabits the sandy deserts covered with scattered bushes, or the dry hills.

*B. m. magnirostris*, from the forest and open country of Australia, has two subspecies—*ramsayi* from northern Queensland, with longer legs and a tendency to longer bill; *B. m. rufescens*, north-western Australia and Northern Territory, smaller and with upper parts more rufescent. *B. m. broomei*, Western Australia, requires further confirmation.

*B. recurvirostris*, a dweller by the banks of the big rivers in India, Burma, and Ceylon, has no subspecies. *B. n. neglectus*, from the shores of northern Australia and the Malay Archipelago, has one subspecies, *B. n. scommophorus*, from the Tambelan Islands, examples of which I have not been able to examine.

The general coloration of the upper parts of the Burhinidæ varies from dark ash-grey of *B. m. magnirostris* to hair-brown, sepia, ash-brown, sandy yellowish, buff, to isabelline, with lighter edges, and with black, brown, or sepia streaks, vermiculations, and spots; in *neglectus* and *recurvirostris*, *bistriatus* and *superciliaris*, these markings are absent, the upper parts being more or less uniform; in *bistriatus* and *superciliaris* the feathers are broadly margined buff; dark superciliary stripes are characteristic of these four species, and do not occur in the other members of the genus. The lower throat and upper breast are streaked in all except *superciliaris* and *recurvirostris* (faintly in *bistriatus* and *neglectus*). The same colour-pattern of remiges and rectrices runs through the whole group, as does the white chin and cinnamon-buff under tail-coverts. The white patch towards the tip of the outer primaries, so characteristic of the group, varies considerably, specifically and individually; in *B. m. magnirostris* this white patch occurs on the first four developed primaries; in *B. æ. ædicnemus* it is normally confined to the first two developed primaries, though it may be present on the third developed primary in some subspecies, e. g., *B. æ. saharae*; in all the other Stone-Curlews the white patch normally extends to the third developed primary.

There is only one adult plumage; both sexes are alike, and the juvenile plumage closely resembles that of the adult. Unfortunately, very few nestlings have been examined; it is interesting to note that the same colour-pattern persists in nestling *magnirostris*, *ædicnemus*, and *recurvirostris*, the ground-colour in *magnirostris* being greyish white and in *ædicnemus* isabelline. The eggs of *B. æ. ædicnemus*, *B. s. senegalensis*, *B. v. vermiculatus*, *B. c. capensis*, *B. b. bistriatus*, *B. m. magnirostris*, *B. recurvirostris*, and *B. neglectus* have been examined: they are all very similar, with a ground-colour of creamy or light buff or olive-buff, blotched, striated, mottled, or spotted with various shades of brown. Some of those of *B. c. capensis* are very heavily mottled with brown.

There is no doubt the Burhinidæ are a very old group and have branched off early from the Limicoline tree. The fact that they are not, with the exception of *B. æ. ædicnemus*, natural migrants, and yet are widely distributed, two species occurring in South America, is further evidence of their antiquity. They are nearly allied to the Bustards in structure: in both the nostrils are holorhinal, while the legs and feet are very similar; though in the Burhinidæ the toes are webbed at base, which distinguishes them from the Bustards; both have the habit of hiding by squatting. The Oyster-catchers are their nearest allies among the Limicolæ.

Their subspecies seem attributable to environment, not to genetic characters, and appear to bear out the Darwinian and not the Mendelian theory: the species themselves have probably been evolved directly from geographical races by the slow process of evolution. That they are not highly specialized is borne out by the fact that the adult plumage closely resembles the juvenile; *C. c. capensis* and its subspecies appear to be the most highly specialized, for in this species the upper parts and wing-coverts in the juvenile are streaked, not spotted; the spotted plumage must, therefore, be of more recent development, and apparently a most successful development, as *B. c. capensis* and its subspecies are more widely distributed in Africa than the other Stone-Curlews. The white wing-spots, so characteristic of this group, possibly serve as recognition-marks during their nocturnal wanderings.

There is little migration among the Stone-Curlews; all the species except *Burhinus æ. ædicnemus*, so far as we know, are residents. *Burhinus æ. ædicnemus* is a summer visitor to its northern breeding haunts, and has been observed migrating in flocks of from five to fifty. Among its subspecies, *B. æ. saharae* is partially migratory in Palestine, its numbers in southern Palestine being considerably augmented in the winter. Possibly *B. æ. astutus* also migrates, but more information is required on this point.

The culmen is measured from the tip to where it joins the skull, and the wings fully extended.

*Key to the Species of the Genus BURHINUS.*

- |   |                           |
|---|---------------------------|
| 1. Bill upturned .....  | <i>B. recurvirostris.</i> |
| Bill not upturned .....   | 2. [subsp.]               |
| 2. Culmen over 70 mm.....   | <i>B. neglectus</i> et    |
| Culmen under 70 mm. ....  | 3.                        |
| 3. Lower parts uniform.....   | <i>B. superciliaris.</i>  |
| Lower parts not uniform .....   | 4.                        |
| 4. With broad black-brown band on side of head<br>above white eye-stripe .....                                    | [subsp.]                  |
| With no black-brown band on side of head ....   | <i>B. bistrictus</i> et   |
| 5. Dark streaks on breast about 4 mm. wide; wing<br>over 260 mm. ....   | 5.                        |
| Dark streaks on breast under 2 and rarely 3 mm.<br>wide; wing under 260 mm.....                                   | [subsp.]                  |
| 6. Feathers of upper parts boldly barred and<br>spotted black-brown .....   | <i>B. magnirostris</i> et |
| Feathers of upper parts not boldly barred and<br>spotted black-brown .....  | 6.                        |
| 7. Feathers of upper parts with black-brown shaft-<br>streaks and numerous vermiculations of same.                | [subsp.]                  |
| Feathers of upper parts with shaft-streaks of<br>varying intensity and size, but without ver-<br>miculations..... | <i>B. capensis</i> et     |
| 8. With white and black-brown bars across upper<br>wing.....  | 7.                        |
| Without white and black-brown bars across<br>upper wing .....   | [subsp.]                  |
|   | <i>B. vermiculatus</i> et |
|   | 8.                        |
|   | [subsp.]                  |
|   | <i>B. œdicnemus</i> et    |
|   | [subsp.]                  |
|   | <i>B. senegalensis</i> et |

***Burhinus œdicnemus œdicnemus* (L.).**

*Charadrius œdicnemus* Linnæus, Syst. Nat. 10th ed. p. 151 (1758—"Habitat in Anglia").

*Charadrius scolopax* Gmelin, Reise durch Russland, iii. p. 87, pl. xvi. (1774—Ghilan, North Persia, probably near Enzeli, on the Caspian, "on spring passage near Astrachan". As it is not known whether Gmelin's bird was obtained in summer or winter, it must be a matter of doubt as to whether *scolopax* should be applied to the typical race or to *astutus*).

*Charadrius illyricus* Piller and Mitterpacher, Iter p. Poseganam Sclavoniæ, p. 26, pl. iii. (1783—Sclavonia).

*Ædicnemus crepitans* Temminck, Man. d'Orn. p. 332 (1815—nom. nov. for *Charadrius ædicnemus*).

*Ædicnemus griseus* Koch, Syst. d. baier. Zool. p. 266 (1816—nom. nov. for *C. ædicnemus*).

*Ædicnemus europæus* Vieillot, Nouv. Dict. d'Hist. Nat. xxiii. p. 230 (1818—new name for *Otis ædicnemus* Latham ex Daubenton's Pl. Enl. p. 919).

*Ædicnemus belonii* Roux, Orn. Provenç., pl. cclxvi. (1825).

*Ædicnemus desertorum* Brehm, Handb. Naturg. Vög. Deutschl. p. 539 (1831—North Germany).

*Ædicnemus arenarius* Brehm, *l. c.* (1831—South Europe).

*Ædicnemus crepitans platyurus* A. E. Brehm, Verz. Samml. (1866, p. 11—nomen nudum).

*Description*.—*Adults*. Crown heavily streaked black-brown, feathers edged buff; nape same but streaks narrower; rest of upper parts and innermost secondaries dark ash-brown with mesial streaks of black-brown and fringed warm or cinnamon buff, mantle-feathers with black-brown centres; streak below eye, moustachial streak, lower throat, and breast warm buff streaked black-brown, flanks same with black-brown shaft-streaks; under tail-coverts cinnamon buff; chin and rest of underparts white; central pair of tail-feathers greyish brown irregularly marked darker; rest broadly tipped black, banded white subterminally and barred white and ash-brown; primaries and secondaries black, white basally; first and second developed primaries with broad white patches across middle of web, sometimes absent from second, usually absent from third; greater coverts ash-brown, shading to greyish white, tips black-brown forming a wing-bar; lower series of median coverts grey, narrowly edged buff with black-brown shaft-streaks, upper series with white wing-bar bordered above and below with black-brown; lesser coverts black-brown fringed tawny\*.

*Nestling*. Upper parts sandy with irregular black-brown lines on head, two broad black parallel lines down centre of back, a black line across wing, sometimes indistinct, another

\* Some specimens of *B. æ. ædicnemus* have the upper parts paler and sandier, closely approaching *B. æ. saharae*.

from side of back to uropygial tuft; underparts buffish white; upper breast sandy buff.

*Juvenile.* Upper parts as in adult, but paler, being sepia, feathers narrowly margined buff; underparts usually with narrower mesial streaks; greater coverts ash- or fawn-brown, sepia towards tip and edged or notched white at tip; lower series of median coverts sepia edged buff; bars across upper wing-coverts indistinct.

*Measurements* :—

♂. Wing 230–252; culmen 41–48 mm.

♀. Wing 228–253; culmen 42–47 mm.

*Soft parts.* Bill, base yellow, tip black; legs and feet dull sulphur-yellow; iris clear amber.

*Distribution.*—*Breeding Range.* South and east England, middle and south Europe (Holland, according to Professor Schlegel), not uncommon in north and west Germany and Silesia; common in suitable localities in Pomerania, Brandenburg, and Saxony, southern France, Portugal, Spain, Corsica, Sardinia, Italy, Sicily, Austria, Hungary, Macedonia, southern and middle Russia, Odessa, Astrachan, Kirghiz Steppes, Caspian Provinces and Upper Irtysh. Rare summer visitor to Malta, nesting if not shot.

*Winter Quarters.* Portugal, southern Spain (where numbers of residents considerably increased in winter), Sicily, Greece, Cyclades, northern Persia. Occurs in winter in northern Tunisia and northern Algeria, apparently; according to van Someren is a regular winter visitor to East Africa, and has been obtained in Abyssinia, Sudan, Suakin, Gerba (once), Aden; and has occurred as a straggler in Scotland, Ireland, Denmark, Sweden, Poland, Transylvania, Orenburg, Madeira, Azores, Canaries.

On *autumn passage* occurs in Belgium, France, Portugal, Spain, Bohemia, Italy, Malta, probably west-central Sahara.

On *spring passage* probably occurs in west-central Sahara, Sicily, Malta, Balearics, Portugal, Spain, France, Belgium, Italy, Bohemia, Hungary, bulk moving about April 10th, and has been recorded from Heligoland. They usually arrive in England in late March or early April.



No birds from Somaliland have been examined. One from Sogsoda, Somaliland, 7. 11. 97, a female in the Natural History Museum, London, is undoubtedly *B. æ. astutus*.

*Burhinus œdicens insularum* (Sassi).

*Ædicens œdicens insularum* Sassi, Orn. Jahrb. xix. p. 32 (1908--Canaries).

Seven examined.

*Description*.—*Adults*. Upper parts lighter than *B. æ. œdicens*, feathers edged sandy rufescent; shaft-streaks on throat, breast, and flanks heavier.

*Nestling*. Not to be distinguished from nestling *B. æ. œdicens* (one examined in Tring Mus.).

*Juvenile*. Not examined.

*Measurements* :—

♂. Wing 210–231; culmen 42–45 mm.

♀. Wing 220–228; culmen 40–45 mm.

*Soft parts*. Bill, base yellow, tip black; legs yellow; iris yellow.

*Distribution*. Resident in the eastern Canaries, Allegranza, Lanzarote, Fuerteventura, Graciosa.

*Burhinus œdicens distinctus* (Bannerman).

*Ædicens œdicens distinctus* Bannerman, Ibis, 1914, p. 277: Grand Canary and Tenerife. Type, Grand Canary.

Six examined including type.

*Description*.—*Adults*. Upper parts darker than *B. æ. œdicens*, dark feather centres broader, underparts with ground-colour whiter, markings in consequence bolder. Distinguished from *B. æ. insularum* by darker upper parts, lacking sandy rufescent tinge, underparts lighter.

*Nestling* not examined.

*Juvenile* not examined.

*Measurements* :—

♂. Wing 224–236; culmen 44–47 mm.

♀. Wing 232–244; culmen 44–47 mm.

*Distribution*. Resident in Tenerife, Grand Canary, Hierro.

**Burhinus œdicensaharæ** (Rehw.).

*Edicnemus œdicensaharæ* Reichenow, Journ. f. Orn. 1894, p. 102: "Tunis."

*Description.*—*Adults.* Upper parts lighter, more sandy yellow; crown, mantle, scapulars, lower throat, and breast usually with narrower black-brown streaks than in *B. œ. œdicensaharæ*; third developed primary usually with a white patch of varying size.

*Nestling.* Not examined.

*Juvenile.* Like the adult, but upper parts with narrower mesial sepia centres; upper breast more finely streaked sepia; upper wing-coverts with cream bar ill-defined; black-brown bar absent.

*Measurements* :—

♂. Wing 233–252 (one 224); culmen 41–48 mm.

♀. Wing 235–246; culmen 42–47 mm.

*Soft parts.* Bill, base greenish yellow, tip black; legs and feet greenish yellow; iris yellow.

*Distribution.* Morocco, Algeria, Tunisia, Cyrenaica, east through the Sahara to Egypt, Crete, Cyprus, southern Palestine and northern Sinai. Apparently mostly a resident, but in southern Palestine its numbers are increased in autumn and winter.

It has also been obtained in Mesopotamia (Ticehurst), but whether it breeds there or not has yet to be ascertained.

**Burhinus œdicensastutus** Hart.

*Burhinus œdicensastutus* Hartert, Nov. Zool. 1916, p. 93: South and East Persia (Fao: type examined).

*Description.*—*Adults.* Like *B. œ. saharæ*, but upper parts light buff with a greyish tinge rather than sandy yellow; mesial streaks on upper parts narrower; the dark band on the upper wing-coverts does not appear to be always less marked than in *B. œ. saharæ*.

*Nestling.* Not examined.

*Juvenile.* Not examined.

*Measurements* :—

♂. Wing 230–244; culmen 41–44 mm.

♀. Wing 228–240; culmen 38–45 mm.

*Soft parts.* Bill yellow, tip black; feet yellowish white; iris yellow.

*Distribution.—Breeding Range.* Merv in Turkestan, eastern Persia, Fao, Persian Baluchistan and Sind, and apparently the Indian Desert to the Sirsa district. Specimens have also been examined from Quetta, 7. 3. 14; Sharpur, 25. 11. 7, wing 229; Lahore, no date; Larkana, Upper Sind, Jan.; Murdan, Dec.; Gulran, N. Afghanistan, March; Erzeroom, no date; Muscat (Nov., Jan., April); Mesopotamia (obtained in Mesopotamia and probably breeds—Ticehurst); Amiri district, S. Arabia, Feb., two; Lahej near Aden, Jan., two; and (probably on migration) from Palestine, Beersheba, no date; Somaliland, Feb.; Sinkat, Red Sea Province, Sudan, March; one, a straggler (?), from Cyprus 18. 8. 01. There is no record of *B. æ. astutus* breeding in southern Arabia.

• *Burhinus œdicnemus indicus* (Salvad.).

*Ædicnemus indicus* Salvadori, Atti Soc. Ital. Sc. Nat. viii. p. 381 (1866—India).

*Description.* Like *B. æ. œdicnemus* but smaller, and upper parts lack the buff coloration; mantle feathers with smaller and rather darker centres; underparts lighter with fewer and narrower streaks. *B. æ. indicus* is easily distinguished from *B. æ. astutus* by the dark ash-brown upper parts lacking the buff coloration, and more heavily streaked black-brown, and by its smaller size.

*Nestling.* Not examined.

*Juvenile.* Like adult but darker; feathers of upper parts smaller and with proportionately larger dark centres and paler edges; innermost secondaries and wing-coverts margined paler; underparts paler buff and apparently with narrower streaks. One examined.

*Measurements:—*

♂. Wing 203–222; culmen 43–45 mm. 5 measured.

♀. Wing 205–216; culmen 41–47 mm. 7 measured.

No sex. Wing 208–222; culmen 43–47 mm. 16 measured.

*Distribution.* India, Ceylon, Burma, S.W. and C. Siam. One bird from Siam is much darker; wing 217 mm.

*Burhinus senegalensis senegalensis* (Swains.).

*Ædicnemus senegalensis* Swainson, B. W. Afr. ii. p. 228 (1837—Senegal).

*Ædicnemus inornatus* Salvadori, Atti Soc. Ital. Sc. Nat. viii. p. 381 (1866—Abyssinia).

*Ædicnemus virgatus* Württemberg MS., Heuglin, Journ. f. Orn. 1867, p. 303.

*Description.*—*Adult.* Similar to *B. æ. ædicnemus* but smaller; upper parts lighter, ground-colour greyish brown; feathers, especially those of mantle, with much narrower streaks and with reddish-cinnamon buff edges; median wing-coverts without whitish and sepia bars, and paler, with sepia shaft-streaks; greater coverts pale grey with sub-terminal black-brown wing-bar.

*Measurements* :—

♂. Wing 202–217; culmen 46–52 mm. 5 measured.

♀. Wing 208–220; culmen 48–50 mm. 6 measured.

No sex. Wing 210–220, one 231; culmen 47–53 mm. 10 measured.

*Soft parts.* Bill black, base pale yellow; legs pale yellow; iris pale yellow.

*Distribution.* Apparently resident in western Africa from Senegambia to the Niger, Benue, Gaboon, Loango.

Birds examined from Kayes (Senegal), Gambia, Boloma (Portuguese Guinea), Accra, Gold Coast Hinterland, River Volta, Gold Coast Colony, Anambara Creek, Niger River, Upper Niger, Loko Benue River, near Ibi, and near Lagos, Nigeria, Yo River and Shari River (both flowing into Lake Chad); Cameroon, French Ubangi.

*Burhinus senegalensis assimilis* (Bädeker).

*Ædicnemus assimilis* Bädeker, Journ. f. Orn. i. Extra part, p. 117 (1854—Eastern Sudan).

*Description.* Easily distinguished in fresh plumage from *B. s. senegalensis* by the greyer upper parts, feathers with paler buff edgings and markings, not edged and marked

reddish cinnamon as in *B. s. senegalensis*. In worn plumage with edges abraded, the two races are hardly distinguishable. Twenty-eight examined.

*Nestling*. Identical with nestling *B. æ. ædicnemus*, but no black-brown bar on wing. One examined.

*Juvenile*. Very like adult; feathers softer in texture, upper parts margined paler buff, breast more narrowly streaked; greater and lower series of median coverts sepia (bases fawn grey), tipped white; upper series tinged and margined light buff; lesser coverts paler.

*Measurements* :—

♂. Wing 211–228, one 232, one 235. 12 measured.

Culmen 45–53, one 42. 13 measured.

♀. Wing 215–227, one 230. 12 measured. Culmen 44–51. 9 measured.

No sex. Wing, one 220, one 242; culmen 45–51. 3 measured.

*Distribution*. Resident in Egypt, Abyssinia, Egyptian Sudan.

Birds examined from Egypt; Egyptian Sudan (Khartoum, Sennar, Blue Nile, Wad Habushi, Fashoda, Baro River, Lake No, Shambé, Rahad River, Mongalla, Lado, Raffali, Chak Chak); Eritrea (Massowa); Abyssinia (Amba, Omo).

One from Kenya Colony appears to be intermediate; one from Bahr el Ghazal in the Natural History Museum belongs to the typical race, another from same locality appears to be *B. s. assimilis*.

Van Someren has obtained this species from Kobua, and Meuressi west of Lake Rudolf.

***Burhinus vermiculatus vermiculatus* (Cabanis).**

*Ædicnemus vermiculatus* Cabanis, J. f. O. 1868, p. 413: Central East Africa.

*Ædicnemus natalensis* Gray, List of Specimens of Birds in Coll. Brit. Mus., part iii. Grallæ, p. 59 (1844—nom. nudum: Natal).

*Ædicnemus senegalensis* (nec Sw.) Kirk, Ibis, 1864, p. 331 : Zambesi.

*Ædicnemus gularis* Finsch & Hartl. Orn. Ost-Afr. p. 622 (1870).

*Description—Adults.* Differ from *B. æ. ædicnemus* in having the ash-brown upper parts, central tail-feathers, and innermost secondaries vermiculated sepia and buff ; some feathers of mantle with black-brown centres, rest of feathers with black-brown shaft-streaks ; third developed primary with broad white patch across both webs towards tip. Greater and median wing-coverts pale grey ; greater coverts broadly tipped black-brown, forming a wing-bar ; median coverts with sepia shaft-streaks, a white wing-bar with irregular black-brown bar above, but with no sepia bar below across upper median coverts ; lesser coverts ash-brown edged tawny.

*Nestling.* Like nestling *B. æ. ædicnemus*, but upper parts isabelline rather than sandy. Two black lines down centre of back in *B. æ. ædicnemus* broken up into patches in *B. v. vermiculatus* ; down of upper breast isabelline buff with dusky brown bases. Two examined.

*Juvenile.* As adult but plumage softer and looser ; streaks on fore-neck and upper breast paler and narrower ; upper wing-coverts with black-brown bar ill-defined, feathers broadly edged tawny ; white bar ill-defined and suffused with buff, median and greater coverts more or less clouded with buff ; greater coverts broadly tipped white and with black-brown bar merely indicated.

*Measurements :—*

♂. Wing 199–210 ; culmen 45–48. 11 measured.

♀. Wing 198–210, one 220 ; culmen 45–50. 13 measured.

No sex. Wing 195–208 ; culmen 43–47. 7 measured.

Four males and two females from Ogowe River, Gaboon, appear to have stouter and slightly larger bills :—

♂. Wing 207–208 ; culmen 49–54.

♀. Wing 198–200 ; culmen 48–49.

There is not much in the measurements, but to the eye

the bill appears stouter ; possibly the birds are intermediate between *B. v. vermiculatus* and *B. v. büttikoferi*.

*Soft parts.* Bill black, base yellow ; legs pale ashy green ; iris tawny yellow.

*Distribution.* Resident in Cape Colony, Natal, Transvaal, Zululand (Ivuna River), Bechuanaland, Mashonaland (Quæ Quæ River), Portuguese East Africa (Beira), N.E. Rhodesia, Nyasaland (Luchindi, Lake Nyasa, Mweru), Zanzibar, Tanganyika Territory (Kisiwani, Lake Kivu, Pangani River, Lake Tanganyika), S.E. Ruwenzori (Mokia), Uganda (Entebbe) (according to van Someren, very common in Uganda), Lake Albert, Kenya (Benia, Athi River, Lamu and M'Koi), Damaraland (Ehanda), Benguella, Angola, Loango, Gaboon (Ogowe River), and Upper Congo (Upoto).

***Burhinus vermiculatus büttikoferi* Reichenow.**

*Burhinus vermiculatus büttikoferi* Reichenow, Orn. Monatsber. 1898, p. 182 : Liberia.

*Description.* Very like *B. v. vermiculatus*, but ground-colour of upper parts greyer, dark vermiculations of scapulars, upper tail-coverts, and wing-coverts indistinct ; bill stronger. Only one examined.

*Measurements* :—

Wing 200–210, bill 50–53 (Reichenow).

1 ♀. Wing 204, bill 54 : Liberia (Nanna Kru).

*Soft parts.* Bill black, green at base ; feet greenish ; iris yellow.

*Distribution.* Liberia.

***Burhinus capensis capensis* (Licht.).**

*Ædicnemus capensis* Lichtenstein, Verz. Doubl. p. 69 (1823—S. Africa).

*Ædicnemus macrocnemus* Lichtenstein, Vög. Kaffernl. p. 19 (1842—Cape of Good Hope).

*Ædicnemus csongor* Madarász, Archiv Zool. vol. i. no. 2, p. 11 (1908—Schirati).

*Description.*—*Adults.* Upper parts, central tail-feathers, and wing-coverts warm buff ; crown, nape, and upper mantle

broadly streaked, rest boldly barred and spotted black-brown; upper wing-coverts as upper parts and without white and blackish-brown bars; greater coverts pale drab-grey, irregularly marked and barred sepia; fore-neck, breast, and sides of body warm buff boldly streaked sepia, rest of underparts white; sometimes belly also streaked and vent only white.

*Nestlings.* Not examined.

*Juvenile.* Like adult, but feathers of upper parts and median wing-coverts with broad central sepia streaks; scapulars and upper tail-coverts more narrowly barred pale sepia; fore-neck and breast paler buff and more narrowly streaked sepia.

*Measurements:*—

♂. Wing 224–242; culmen 41–48.

♀. Wing 222–247; culmen 40–48.

No sex. Wing 230–246; culmen 42–46.

37 examined.

*Soft parts.* Bill yellow at base, tip black; legs yellow; iris yellow.

*Distribution.* Resident and generally distributed in Cape Province (birds examined from Port Elizabeth, King William's Town, etc.), Orange Free State Province (Vredefort Rd.), Natal (Berg River, Newcastle, Port Natal), Swaziland, Zululand (Umfolosi), Transvaal (Harts River, Potchefstroom, Klein Letaba, Rustenberg, Wakerstroom), Bechuanaland, Matabeleland, Mashonaland (Salisbury), Portuguese East Africa (Tete), Tanganyika Territory (Mpapua, Tabora, Ussamburo, Morogoro), Kenya (Machakos, Kikuyu Mts., Athi plains), Uganda and Angola.

*Burhinus capensis damarensis* (Rehw.).

*Edicnemus capensis damarensis* (Reichenow), Vög. Afr. iii. Nachtr. 1905, p. 801: German South-West Africa.

*Description.*—*Adults.* Like *B. c. capensis*, but upper parts paler and greyer. Two examined.

*Measurements.* Wing 224–236; culmen 42–44.

*Distribution.* South-West African Protectorate.



*Burhinus capensis maculosus* (Temm.).

*Ædicnemus maculosus* Temminck, Pl. Col. 292 (1824—wide distribution given, but specimen from Senegal figured and described).

*Ædicnemus affinis* Rüppell, Mus. Senckenb. ii. p. 210 (1837—Kordofan, Nubia, but terra typica Red Sea coast of Abyssinia ex Syst. Uebers. Vög. N.O. Afr. pp. 112, 117).

*Ædicnemus capensis psammochromus* Reichenow, Vög. Afr. iii. p. 801 (1905—Togo apparently to Senegal).

*Description.* Like *B. c. capensis*, but upper parts brighter, pinkish buff rather than warm buff, black spots, especially those of centre of mantle, smaller. Abdomen unspotted except along flanks.

*Juvenile.* As adult but upper parts paler, median wing-coverts and feathers of upper parts with broad central sepia streaks, scapulars and upper tail-coverts more narrowly barred pale sepia; fore-neck and breast paler and more narrowly streaked sepia.

*Measurements* :—

(1) West African birds from Thies, near Senegal, Asben, Touareg Country, Gambaga, Gold Coast Hinterland, Togoland.

♂. Wing 214–235; culmen 39–42.

♀. Wing 222; culmen 42.

(2) Birds from Somaliland, Abyssinia, Sudan.

♂. Wing 215–226; culmen 44–49.

♀. Wing 220–237; culmen 44–49.

2 no sex. Wing 213–219; culmen 42–46.

*Soft parts.* Bill, tip blackish, base yellow; feet bright yellow; iris bright yellow.

*Distribution.* Apparently resident in Senegal (Thies), French Sahara (Asben), Gold Coast Hinterland (Gambaga), Togoland, Central Sahara, Upper Nile, Eritrea (Bogos), Abyssinia (Anseba valley and Goufallon), Somaliland (Jiffa, Burao, Dibbit, Sogsoda, Hargaisa, Obbia, Sibbé, Sheikh, near Berbera), Sudan (White Nile, Lake No, Jebelein), Kordofan, Darfur (Jebel Mara, Zalingei, Kulme,

east of Fasher) Bahr el Ghazal (Wau), one Lado, one Guaso-Nyero in Kenya.

The bird from Wau, Bahr el Ghazal, appears to be intermediate between *B. c. capensis* and *B. c. maculosus*.

**Burhinus capensis dodsoni** (Ogilvie-Grant).

*Ædicnemus dodsoni* Ogilvie-Grant, Bull. B. O. C. x. 1899, p. 19 : Lahej, S. Arabia.

Six examined, including the type.

*Description.* Like *B. c. maculosus*, but upper parts, central tail-feathers, and upper wing-coverts paler, sepia markings smaller and paler, light sepia rather than black-brown, with black-brown shaft-streaks ; throat and breast more heavily streaked brownish black, central tail-feathers in some mostly grey with sepia vermiculations and cross-bars ; greater coverts greyer.

*Measurements.* Wing 216–221, one 235 ; culmen 43–49.

*Soft parts.* Bill yellow, tip black ; legs greenish yellow ; iris yellow.

*Distribution.* South Arabia, and the coast of N. Somaliland according to Zedlitz.

**Burhinus capensis ehrenbergi** (Zedlitz).

*Ædicnemus capensis ehrenbergi* Zedlitz, Orn. Monatsber. 1910, p. 9 : Dahlak Islands, Red Sea.

*Description.* In colour between *B. c. affinis* and *B. c. dodsoni*, prevailing tone of upper parts light yellowish isabelline, with smaller spots, not sandy isabelline as in *B. c. affinis*, and not so light as *B. c. dodsoni* ; upper tail-coverts with bold transverse bars (in *B. c. dodsoni* these bars are indistinct) ; under tail-coverts dark rust-red, darker than in *dodsoni*.

Not examined.

*Distribution.* Dahlak Islands, Red Sea.

**Burhinus bistriatus bistriatus** (Wagl.).

*Charadrius bistriatus* Wagler, Isis, 1829, p. 648 : Mexico.

*Ædicnemus vocifer* L'Herminier, Mag. de Zool. 1837, pl. 84 : U.S. Colombia.

*Ædicnemus americanus* Swainson, An. in. Menag. p. 349 (1837—Interior of Guiana).

*Ædicnemus mexicanus* teste Schlegel, Mus. Pays-Bas, Cursores, p. 19 (1865—Tropical America).

*Description.*—*Adults.* Upper parts, central pair tail-feathers and innermost secondaries and coverts sepia, broadly edged warm buff at sides of feather. Upper tail-coverts usually barred sepia; nape and lower throat warm buff narrowly streaked sepia; from forehead above eye to hinder crown a broad white streak, above which a broad black-brown streak; lores, malar spot, cheeks, and ear-coverts buff narrowly streaked sepia; upper breast pale ashy fawn, feathers with sepia shafts; under tail-coverts cinnamon buff, rest of underparts white; rest of tail-feathers and remiges much as in *B. æ. ædicnemus*, but third developed primary usually marked white towards tip; inner primaries not tipped white; wing-coverts as upper parts but with paler sepia centres.

*Juvenile.* Very like adult, but feathers of mantle and scapulars much smaller and more broadly fringed buff at tip; not so elongated and broadly fringed buff at sides of feather as in adult; wing-coverts smaller.

*Measurements* :—

♂. Wing 240–267; culmen 49–57.

♀. Wing 237–250; culmen 45–60.

No sex. Wing 233–245; culmen 47–58.

22 examined.

*Distribution.* Apparently resident in Mexico (Vera Cruz, Chiapas), Guatemala (Huamuchal, San Geronimo), Colombia (Bogota), Venezuela (Paraguana, Merida), British Guiana (Quonga, Annai), Brazil (Fort de Rio Branco).

*Burhinus bistriatus dominicensis* (Cory).

*Ædicnemus dominicensis* Cory, Journ. Bost. Zool. Soc. ii. p. 46 (1883—San Domingo).

*Description.* One examined. Apparently identical with *B. b. bistriatus* but smaller; wing 299, culmen 48 mm. The upper parts and wing-coverts appear to have narrower and paler edges.

*Distribution.* San Domingo.

**Burhinus superciliaris** Tschudi.

*Ædicnemus superciliaris* Tschudi, Arch. Nat. 1843, pt. i. p. 387 : Coast of Peru.

*Description.*—*Adults.* Upper parts, central tail-feathers and median coverts ashy brown, feathers narrowly tipped and edged light buff, and with a subterminal wavy sepia border; greater coverts pale drab grey without black-brown wing-bar; lesser coverts sepia, tipped warm buff; throat and upper breast palest grey suffused and edged buff and with narrow shaft-streaks; feathers at sides of breast subterminally vermiculated sepia.

*Nestling and juvenile* not examined.

*Measurements* :—

♂. Wing 220–232; culmen 44–45.

♀. Wing 225 ; culmen 41.

No sex. Culmen 41.

8 examined.

*Soft parts.* Bill, base yellowish, tip horn; feet dirty yellow-green; iris pale yellow.

*Distribution.* Peru (Puerto de Eten, Amotape, Trujillo, Lima).

**Burhinus magnirostris magnirostris** (Latham).

*Charadrius magnirostris* Latham, Index Ornith. Suppl. p. lxvi (1801—New South Wales).

*Charadrius grallarius* Latham, Index Ornith. Suppl. p. lxvii (1801—New South Wales).

*Charadrius frenatus* Latham, op. cit. p. lxvii (1801—New South Wales).

*Ædicnemus longipes* Vieillot, N. Dict. d'Hist. Nat. xxiii. p. 232 (1818—New South Wales).

*Burhinus novæ-hollandicæ* Stephens in Shaw's Gen. Zool. xiv. pt. i. p. 342 (1826—New Holland).

*Charadrius giganteus* Wagler, Isis, 1829, p. 647 : Australia, no locality given.

*Ædicnemus major* Brehm, Isis, 1845, p. 357 : New Holland.

*Ædicnemus australis* Scl. P. Z. S. 1859, p. 212: nomen nudum, no locality.

*Description*.—*Adults*. Crown, nape, upper mantle, back, rump and upper tail-coverts dark ash-grey with sepia shaft-streaks; central pair of tail-feathers the same, but vermiculated and barred sepia; feathers of mantle and some scapulars with black-brown centres and dark ash-grey or narrow pinkish-buff edges; rest of scapulars and innermost secondaries sepia with black-brown shaft-streaks; eyestripe, patch under eye, forehead, lores, chin, and belly white; ear-coverts and malar patch buff thickly streaked sepia; lower throat and breast boldly streaked sepia; lower throat and upper breast suffused buff; flanks white with sepia shaft-streaks; under tail-coverts cinnamon-buff; colour-pattern of rest of tail-feathers similar to those of *B. œ. œdicnemus*; first four developed primaries with a broad white patch across both webs towards tip and white towards utmost base; inner primaries without white tips; greater coverts fawn brown shading to black-brown at tip; lower median coverts sepia, upper cream buff, all with black-brown shaft-streaks; lesser coverts as in *B. œ. œdicnemus*.

*Nestling and juvenile* not examined.

*Measurements* :—

♂. Wing 272–299; tarsus 116–135; culmen 46–55.

♀. None examined.

No sex. Wing 288–296; tarsus 120–129; culmen 49–60.

9 examined.

*Soft parts*. Bill black; legs yellow; feet brown; iris greyish yellow (Mathews).

*Distribution*. Victoria, New South Wales, South Australia, Tasmania.

*Burhinus magnirostris broomei* Mathews.

*Burhinus magnirostris broomei* Mathews, Nov. Zool. xviii. p. 266 (1912—Broome Hill, S.W. Australia). Type examined.

*Description*. Said to be smaller than *B. m. magnirostris*, especially tarsus, but requires confirmation.

*Measurements* :—

Type ♀. Wing 270; tarsus 115; culmen 45. Broome Hill.  
 ♂. Wing 277; tarsus 118; culmen 51. Broome Hill.  
 ♂. Wing 287; tarsus 132; culmen 58. Oyster Har-  
 bour, S. Australia.

2 no sex. Wing 267; tarsus 118–123; culmen 54–59. Bever-  
 ley and East Pinjelly, S.W. Australia.

*Distribution.* South-Western Australia.

*Burhinus magnirostris rufescens* Mathews.

*Burhinus magnirostris rufescens* Mathews, Nov. Zool.  
 xviii. p. 225 (1912—Parry's Creek, N. W. Australia).  
 Type examined.

*Description.* Like *B. m. magnirostris*, but feathers of sides  
 of upper mantle and scapulars broadly margined pinkish  
 buff; lower throat and breast suffused pinkish buff, especially  
 at sides, and much more narrowly streaked black-brown.

*Nestling.* Not examined.

*Juvenile.* Like adult, but mantle-feathers with smaller  
 sepia centres; scapulars and innermost secondaries barred  
 sepia and buff; underparts more closely streaked sepia; only  
 one—a moulting bird—examined.

*Measurements* :—

♂. Wing 261–280; tarsus 126–137; culmen 56–61.  
 ♀. Wing 261–274; tarsus 123–134; culmen 48–59.  
 No sex. Wing 262; tarsus 123; culmen 55.

12 examined.

*Distribution.* North-West Australia and Northern Terri-  
 tory.

*Burhinus magnirostris ramsayi* Mathews.

*Burhinus magnirostris ramsayi* Mathews, Nov. Zool.  
 xviii. p. 225 (1912—Mackay, Queensland). Type examined.

*Description.* Like *B. m. magnirostris*, but tarsus longer.

*Nestling.* Above greyish white with black-brown bands  
 from eye to eye across forehead and on to culmen, from  
 lores encircling eye and passing down side of nape and  
 mantle to uropygial tuft; another from centre of forehead  
 to hinder crown: one along wing and one from uropygial

tuft to head of tibia; underparts white, throat intermixed blackish and buff.

*Juvenile*. Like adult, but feathers of crown, nape, upper mantle, back, and upper tail-coverts heavily streaked sepia; mantle and scapulars with smaller dark centres; scapulars and innermost secondaries more or less barred black-brown and buff at tip; lower median coverts broadly notched white; upper ones with sepia centres; underparts dirty buffish white; lower throat more heavily streaked. One examined.

*Measurements* :—

♂. Wing 281–295; tarsus 135–147; culmen 53–59.

♀. Wing 278–295 (one 266); tarsus 131–145; culmen 52–62. 8 examined.

*Distribution*. North Queensland.

*Burhinus neglectus neglectus* (Mathews).

*Edicnemus magnirostris* Vieill. (nec Latham) *Nouv. Dict. d'Hist. Nat.* xxiii. p. 231 (1818—ex Geoffr. MSS. No locality: Binongka, Celebes, in error. Timor, collected by Peron). None examined from type-locality.

*Charadrius giganteus* Wagl. *Isis*, 1829, p. 647 (ex Licht. in *Mus. Berol.*): Australia. No locality given. Identity uncertain.

*Edicnemus major*, Brehm *teste* Gray, *Hand-list B.* iii. p. 10, No. 9948, 1871. Nomen nudum; no type-locality; distribution given as N.W. Australia, Moluccas, Isle of Sonda.

*Esacus magnirostris neglectus* Mathews, *Nov. Zool.* xviii. p. 226, 1912: Type Lewis Island, mid-west Australia. Type examined.

*Esacus magnirostris melvillensis* Mathews, *Austral. Av. Rec.* vol. i. pt. 4, p. 85, 1912: Melville Island, Northern Territory. Type examined.

*Esacus magnirostris queenslandicus* Mathews, *Austral. Av. Rec.* vol. ii, pt. 1, p. 6, 1913: Mackay, Queensland. Type examined.

*Description*.—*Adults*. Upper parts, innermost secondaries and central pair tail-feathers hair-brown with darker shafts; crown and nape with dark shaft-streaks; upper tail-coverts

and central pair tail-feathers usually vermiculated darker; white eye-stripe above which black-brown band extends to ear-coverts; white patch below eye below which black-brown band widening out on ear-coverts; large black-brown malar spot; moustachial streak and chin white; lower throat greyish buff with sepia streaks; upper breast pale grey; flanks white suffused with buff; under tail-coverts cinnamon-buff; rest of underparts white suffused with buff; tail-feathers, except central pair, hair-brown, sometimes partly vermiculated sepia, subterminally banded white and broadly tipped black-brown, outer ones more or less white basally; first five developed primaries sepia, broad white band on both webs of 1st and white patch of various sizes on 2nd, 3rd, and towards base on 4th and 5th; inner primaries predominatingly white; secondaries sepia usually tipped white and with white bases, inner ones fawn-grey with inner webs largely white; wing-coverts pale fawn-grey, those bordering lesser coverts subterminally banded white forming white wing-bar which is outlined below with a narrow brown line; lesser coverts black-brown.

*Nestling.* Not examined.

*Juvenile.* Like adult, but feathers of upper parts, wing-coverts, and innermost secondaries margined buff; underparts suffused deeper buff than in adult. One examined.

*Measurements :—*

AUSTRALIA.			
<i>Sex.</i>	<i>Wing.</i>	<i>Culmen.</i>	<i>Locality.</i>
1 ♀ . . . . .	285.5	78	Lewis Island, Mid-West Australia.
			(Type of <i>E. m. neglectus</i> Mathews.)
1 ♂ . . . . .	282	73	N.W. Australia.
4 ♀ . . . . .	272-288	76-82	N.W. Australia.
1 ♂ . . . . .	280	84	Melville Island.
			(Type of <i>E. m. melvillensis</i> Mathews and the only bird examined from Melville Island.)
1 ♂ . . . . .	286	84	Mackay, Queensland.
			(Type of <i>E. m. queenslandicus</i> Mathews.)
3 No sex. . . . .	275-279	80-82	Queensland.
1 ♂ . . . . .	282	80	Cape York.
2 ♀ . . . . .	270-276	80-81	Cape York.
1 ♀ . . . . .	273	79	Cape York.



NEW CALEDONIA.			
<i>Sex.</i>	<i>Wing.</i>	<i>Culmen.</i>	<i>Locality.</i>
1 ♂	278	85	
ANDAMANS.			
2 ♂	275-277	80-82	Little Cocos Island.
3 ♂	267-276	76-78	Andamans.
2 ♀	266-269	78-80	Andamans.
BORNEO.			
♂	282	79 (chipped).	Abai, N. Borneo.
♀	275	79	Sarawak.
PHILIPPINES.			
♂	280	85	N.E. Luzon.
♀	267	77	Palawan.
CELEBES.			
♂	277	88	Menado.
BINONGKA ISLAND (S.E. of Celebes).			
♂	280	81	
♀	283	83	
KALIDUPA (one of the Token Bessey Islands).			
♀	273	82	
♂	279	81	
WAIGIOU.			
♂	274	81	
HALMAHERA.			
No sex	289	80	
MANGOELI.			
♂	265	82	
CERAM.			
♂	268	83	
♀	266	76	
No sex	269	78	
LITTLE KEI ISLANDS.			
♂	—	80	
TEOR.			
♂	274	82	
TIANDOE ISLANDS.			
♀	281	81	
♂	276	82	
ARU ISLANDS.			
♀	271	81	
2 No sex	273-275	81-84	

TIMOR LAUT (Tenimber).			Locality.
Sex.	Wing.	Culmen.	
♀ . . . . .	272	80	
No sex . . .	278	82	
ROMAH.			
♂ . . . . .	284	83	
MOA.			
2 ♂ . . . . .	280-282	79-81	
BABBER ISLANDS.			
♂ . . . . .	282	80	
LETTI ISLANDS.			
♀ . . . . .	280	81	
LUANG ISLANDS.			
♂ . . . . .	275	82	
KALAO.			
♀ . . . . .	276	77	
KANGEAN.			
♀ . . . . .	281	83	
NEW GUINEA.			
— . . . . .	—	81	Huon Gulf, N.E. New Guinea.
♂ . . . . .	284	78	St. Aignan Isles, S.E. New Guinea.
♂ . . . . .	276 (worn).	78	St. Aignan Isles, S.E. New Guinea.
♀ . . . . .	274	84	
♀ . . . . .	—	80	Woodlark Islands.
SOLOMON ISLANDS.			
♂ . . . . .	273	79	Isabel.
2 ♀ . . . . .	258-266	76-81	Isabel.
1 ♂ . . . . .	285	78	Guadalcanar.
ADMIRALTY ISLANDS.			
♀ . . . . .	270	81	
NEW HANOVER.			
No sex . . .	284	81	
DUKE OF YORK.			
♀ juv. . . .	268	73	

*Soft parts.* Bill black, base yellow; legs, lower tibia yellow, tarsus yellowish grey; feet greyish brown; iris and orbital region yellow.

*Distribution.* Resident in mid-western and north-western Australia, Northern Territory, Queensland; New Caledonia, Little Cocos Island, Andamans, Borneo, Philippines, Tambelan, Celebes, Binongka Island, Kalidupa, Waigiou, Halmahera, Mongoeli, Ceram, Little Kei Islands, Teor, Tiandoe Islands, Aru Islands, Timor Laut, Romah, Moa, Babber Islands, Letti Islands, Timor, Luang Islands, Kalao, Kangean, New Guinea, Solomon Islands, Admiralty Islands, New Hanover, Duke of York.

*Burhinus neglectus scommophorus* (Oberholser).

*Orthorhamphus magnirostris scommophorus* Oberholser, Proc. U.S. Nat. Mus. vol. lv. p. 133: Tambelan Islands.

Said to have upper and underparts paler. None examined from type-locality. I cannot agree with Mathews that the extralimital specimens are all lighter than the Australian ones: seven birds examined from the Andamans appear paler with more slender bills, and possibly belong to this subspecies.

*Burhinus recurvirostris* (Cuvier).

*Ædicnemus recurvirostris* Cuvier, Règne Anim. i. p. 500 (1829—No type-locality).

*Carvanaca grisea* Hodgs. J. A. S. Beng. v. p. 776 (1836—Nepal).

*Pseudops griseus* Hodgs. in Gray's Zool. Misc. p. 85 (1844—No type-locality, Nepal).

*Description.*—*Adults.* Like *B. n. neglectus*, but upper parts, innermost secondaries, and central tail-feathers light ashy brown instead of hair-brown, faintly margined sandy buff; crown and nape with dark shafts rather than shaft-streaks; upper tail-coverts and central tail-feathers not vermiculated; forehead white and continuous with white moustachial streak; lower throat and breast uniform pale greyish buff, in some lower throat slightly streaked sepia;

tail-coverts pale cinnamon-buff; flanks and rest of underparts white; rest of tail-feathers as in *B. n. neglectus*, but ashy brown instead of hair-brown, and without vermiculations; 6th developed primary sepia, white towards base of inner web, white patch, in some merely indicated, on 2nd developed primary and absent on 3rd, three white inner primaries broadly banded sepia subterminally; secondaries sepia without white tips, white on outer web confined to utmost base; white wing-bar less defined, brown line absent, lesser coverts lighter.

*Nestling and juvenile* not examined\*.

*Measurements* :—

♂. Wing 257–268; culmen 78–84.

♀. Wing 252–270 (one worn 249); culmen 74–87.

No sex. Wing 252–273; culmen 79–87; 39 measured.

*Soft parts.* Bill black, region of nostrils, gape and base of lower mandible pale green; feet very pale bluish green; iris greenish yellow.

*Distribution.* India (Sharpur, Sind, Gurgaon, Sirsa, Punjab, Delhi, Junna, Etawah, Futtehgurh, Khandeish, Nepal, Bhotan), Burma (Kyasso Creek, Lower Pegu, Amherst, Thatone Creek, Tenasserim), Ceylon, Hainan (two).

## XVII.—On the Nesting of some Nyasaland Ducks.

By C. CLIFTON ROBERTS, M.B.O.U.

DURING the past two years I have been fortunate enough to obtain the nests and eggs of seven species of ducks from Lake Chilwa in Nyasaland, and I have put together these notes in the hope that they would be of interest to some of my fellow-members of the B. O. U.

\* Dr. C. B. Ticehurst at a meeting of the B. O. C. exhibited a nestling of this species, which he describes as follows in the Bulletin B. O. C. Dec. 1922, vol. xliii. p. 72 :—“The ground-colour above is dirty buffy-grey; line from gape, loreal line, line from behind eye down sides of neck black; broken-up black line on dorsum, black line down thighs; neck pale grey, rest of underparts white.” In general appearance the bird was a typical nestling Stone-Curlew.