work mentioned above), under the name of Proto maraschinii, we find it represented as having the mouth perfectly round, and no appearance is shown of the slit or incision in the lower lip; neither is there any mention made of this character in his description. The genus Proto is defined by him as a shell having "a round mouth formed by the reunion of the left lip, which, passing circularly to that of the right side, terminates higher up towards the middle of the last whorl." It is also described as having the lower part of each whorl with a raised band round it, as in many of the species of the genus Terebra. The Proto maraschinii is said by him to be recent. The other species which have been referred to this genus are apparently quite different, both in the mouth and the body of the shell, and must be separated from it. They may possibly enter as species into the genus which I have now formed; and it is somewhat remarkable, if so, that no recent species have hitherto been found. However this may be, the name Proto having been previously used by Leach for a crustacean, and since then adopted by several carcinologists, must stand; and it has the precedence of Defrance's name by ten years.

In the same collection of shells made by Captain Knocker two or three specimens of a turritelliform shell occur, which agree in shape and size (about 9 lines long) with the Proto maraschinii as figured by Defrance. They are, however, so worn and rubbed, that it is

impossible to ascertain exactly their identity.

I may also remark that a species of shell, Cardita ajar, occurring in the same collection (from the Bight of Benin) is likewise found fossil in the Miocene formation in Europe.

## 4. On the Genus Pelargopsis, Gloger. By R. B. SHARPE.

In pursuance of the plan I before proposed to myself, of laying before the Society short synopses of the various genera of Kingfishers which are more or less obscure, I have now the pleasure of submitting a review of the genus Pelargopsis, or Stork-billed Kingfishers. By most authors these Kingfishers have been included in the genus Halcyon; but in my opinion they are more closely allied to Ceryle, to the larger members of which latter genus they bear unmistakable affinity. There is probably no group in the whole family of the "Alcedinidæ" which is involved in greater confusion than the present genus, consequent, apparently, on the close affinity of one species to another, and on the refusal of ornithologists to grant specific rank to the various well-characterized races of the brown-capped section of the genus, and likewise from the wrong identifications of the species of the older authors. I have endeavoured in the present paper to dispel the existing confusion; and by treating the various so-called "races" as good species, which, in my humble opinion, they decidedly constitute, a much clearer idea of the genus Pelargopsis may be arrived at.

I therefore propose to divide and classify the different species as follows. All the birds enumerated in the "clavis" present some distinguishing characteristic, while there are others which will not admit of a separate diagnosis; and these are therefore considered in the light of races or subspecies.

a. Rostro nigro	1. melanoryncha.
b. Rostro rubro.	du san lamas angli
a'. Scapularibus brunneis	2. amauroptera.
b'. Scapularibus cyaneis aut viridi-cyaneis.	
a". Capite haud pileato, collo postico concolori.	
a'''. Major: supra viridi-cyanea	
b'''. Minor: supra lætissime cyanea	
b". Capite indistincte pileato, ochrascenti-cinereo	5. fraseri.
c". Capite distincte pileato.	
a'''. Pileo haud cyaneo lavato.	
a'''. Pileo saturate brunneo	
b"". Pileo albescenti-cinereo	7. burmanica.
b". Pileo pallide brunneo, viridi-cyaneo di-	
stincte lavato	8. floresiana.

I may state that the idea of separating these Kingfishers into different species has not been hastily conceived by me; on the contrary, the conclusions obtained in the present paper are the result of several months' patient study with a very large series of specimens at my command from all localities. It has, indeed, before been mooted whether these birds ought not to be separated as species; and Lord Walden has expressed his opinion (P.Z. S. 1866, p. 553) that the variations in plumage were also coincident with changes of locality.

### 1. Pelargopsis melanoryncha (Temm.).

Alcedo melanoryncha, Temm. Pl. Col. 391 (1826); Schl. Mus. Pays-Bas, Alced. p. 15 (1863); id. Vog. Ned. Ind. Alced. pp. 10, 47, pl. 2 (1864).

Halcyon melanoryncha, Gray, Gen. of Birds, i. p. 79 (1846); Bonap. Consp. Gen. Av. i. p. 155 (1850); Cass. Cat. Halc. Phil. Mus. p. 10 (1852); Wall. Ibis, 1860, p. 142, et P. Z. S. 1862, pp. 335, 338.

Hylcaon melanoryncha, Reich. Handb. Alced. p. 18, t. cccxcix. f. 3074 (1851).

Ramphalcyon melanoryncha, Bonap. Consp. Vol. Anis. p. 10 (1854).

Entire body cream-colour, a little deeper on the throat, and approaching to pale orange on the abdomen and under tail-coverts; forehead dusky grey, the base of a few feathers on the crown also slightly showing this colour; cheeks and ear-coverts more decided dusky grey, the feathers narrowly edged or washed with cream-colour; middle of the back, scapularies, and wing-coverts brownish, washed with dull green, the latter narrowly edged with cream-colour at the tip; quills dark brown, the inner web white at the base, the basal half of the outer web of the primaries and the whole of the outer web of the secondaries dusky green; tail dusky green above, dark brown beneath; bill black; feet dusky; eyes dark brown.

Total length 14 inches, of bill from front 3.3, from gape 3.5, wing 5.9, tail 3.7, tarsus 0.45, middle toe 1.1, hind toe 0.5.

Hab. Celebes and Sula Islands (Wallace).

This is the most distinct species of the genus, easily recognizable by its jet-black bill. It appears to be by no means rare in the island of Celebes, several beautiful specimens having been forwarded to me from thence by my friend Mr. W. T. Fraser, from one of which the above description has been taken.

### 2. Pelargopsis amauroptera (Pears.).

Halcyon amauroptera, Pears. Journ. As. Soc. Beng. 1841, p. 635; Blyth, Ann. Nat. Hist. xii. p. 94 (1843); Gray, Gen. of Birds, i. p. 79 (1846); Blyth, Cat. Birds Mus. As. Soc. Beng. p. 313 (1849); Bonap. Consp. Gen. Av. i. p. 155 (1850); Cass. Cat. Halc. Phil. Mus. p. 10 (1852); Horsf. and Moore, Cat. Birds Mus. E. I. Co. i. p. 124 (1854); Jerdon, Birds of India, i. p. 224 (1862); Blyth, Ibis, 1866, p. 347.

Ramphalcyon amauroptera, Reich. Handb. Alced. p. 17, t. cccclxxxi.

f. 3407 (1851); Bonap. Consp. Vol. Anis. p. 10 (1854).

Pelargopsis amauroptera, Cab. & Heine, Mus. Hein. Th. ii. p. 157 (1860).

Entire head, neck, and under surface of the body yellowish cinnamon; upper part of the back, scapularies, and wing-coverts chocolate-brown; entire back and rump silvery cobalt; quills chocolate-brown, the inner web light cinnamon at the base; tail-coverts and tail chocolate-brown, darker underneath; bill and feet sealing-wax red. Total length 13 inches, of bill from front 3, from gape 3.5, wing 5.8, tail 4, tarsus 0.5, middle toe 1, hind toe 0.5.

Hab. Bengal (Sundurbuns especially); Arakan; Tenasserim provinces; very abundant along the eastern coast of the Bay of Bengal, not yet observed on the western. Not rare in the vicinity of Cal-

cutta (Blyth), Assam (Mus. H. B. Tristram).

I cannot understand how this very distinct and clearly characterized species could ever have been united under any circumstances to the more common *P. gurial*. The whole distribution of the colouring and the brown scapularies at once distinguish it. My description is from an Assamese specimen, kindly lent me by the Rev. H. B. Tristram.

### 3. Pelargopsis gouldi, sp. n.

Whole head and neck and the whole of the under surface of the body rich ochre; upper part of the back, scapularies, wing-coverts, upper tail-coverts, and upper surface of the tail green, slightly inclining to blue on the latter; whole of the back and rump silvery cobalt; quills blackish, the inner web pale orange at the base, the exterior web of the primaries and nearly the whole of both webs of the secondaries bright cobalt; bill rich vermilion; feet dark red. Total length 13 inches, of bill from front 3.2, from gape 3.6, wing 6, tail 3.5, tarsus 0.5, middle toe 1, hind toe 0.5.

Hab. Philippines, Island of Luzon (Cuming; mus. J. Gould).

This new species forms the second of the uncapped section of the genus *Pelargopsis*, the other being the *P. leucocephala* (Gm.) from Borneo. From this latter species it is distinguished by its much larger size, and by the green colour of the upper surface of the body,

this being in P. leucocephala of a rich ultramarine.

Mr. Blyth has referred to this bird as being the only species to which the much-disputed name of leucocephala is really referable. The specimen on which Mr. Blyth made this remark is a Manilla specimen collected by the late Mr. Cuming, and now in the Derby Museum at Liverpool. Mr. T. J. Moore, the well-known curator of the above-named museum, very kindly sent me the bird to examine. I found it apparently quite identical with a specimen in Mr. Gould's collection from Manilla; but, from long exposure to light, the Liverpool specimen has become so bleached that all the rich ochre colour has completely vanished from the head, leaving that portion white, whence Mr. Blyth's remarks.

I consider this species to be very distinct from the Javan species and from the Bornean, and propose to call it after Mr. Gould, who has always most kindly assisted me in my study of Kingfishers.

#### 4. Pelargopsis leucocephala.

Martin-pêcheur de Java, Buff. Pl. Enl. 757.

Alcedo javana, Bodd. Tabl. Pl. Enl. 757 (1783, ex Buff.). White-headed Kingfisher, Lath. Syn. i. pt. ii. p. 678 (1782).

Alcedo leucocephala, Gm. Syst. Nat. i. p. 456 (1788, ex Lath.); Lath. Ind. Orn. i. p. 248 (1790); Bonn, et Vieill. Enc. Méth. i. p. 288 (1823); Shaw & Nodd. Nat. Misc. pl. 793 (1807).

Halcyon leucocephala, Steph. Gen. Zool. viii. p. 100 (1826); Bonap. Consp. Gen. Av. i. p. 154 (1850); Sclater, P. Z. S. 1863,

p. 213.

Alcedo javanica, Shaw, Gen. Zool. viii. p. 67 (1811). Halcyon javana, Gray, Gen. of B. i. p. 79 (1846).

Halcyon javana (part.), Pelz. Reise d. Nov. Vög. p. 49 (1865).

Bakaka and Rajah udong of the natives of Banjermassing (Motley).

Head and back of the neck pale ochre; back of the neck richer ochre; upper part of the back and scapularies ultramarine, with a faint greenish lustre; lower part of the back extremely rich cobalt; wing-coverts rich ultramarine; quills dark blackish brown, the inner web pale ochre at the base, the basal half of the outer web of the primaries and the whole of the outer web of the secondaries very rich ultramarine; tail rich ultramarine above, black beneath; throat and cheeks pale ochre; rest of the under surface of the body rich ochre, a few of the flanks washed with ultramarine; bill dark sealing-wax red; feet dark red. Total length 13 inches, of bill from front 3, from gape 3.3, wing 5.8, tail 3.3, tarsus 0.45, middle toe 0.1, hind toe 0.45.

Hab. Borneo, Sarawak (Wallace); Banjermassing (Motley);

Labuan (Motley).

As Lord Walden has suggested (P. Z. S. 1866, p. 553), the bird

figured by Buffon (l. c.) as the Martin-pêcheur de Java agrees very well with the Bornean Pelargopsis; and as the description also accords with the same bird, I see no reason to refuse the conclusion forced upon us in this manner. On this plate is founded the Alcedo javana of Boddaert; but this name must be dropped as inapplicable, and the term leucocephala, the next in order of priority, be substituted.

### 5. Pelargopsis fraseri, sp. n.

Ispida capitis bonæ spei, Briss. Orn. iv. p. 488.

Alcedo capensis, Linn. Syst. Nat. i. p. 180 (1766, ex Briss.); Bon. et Vieill. Enc. Méth. i. p. 285 (1823).

Halcyon capensis, Bonap. Consp. Gen. Av. i. p. 154 (1850);

Eyton, P. Z. S. 1839, p. 101.

Ramphalcyon javana, Reich. Handb. Alced. p. 7, t. cccxcviii. b. fig. 3406 (1851, nec Bodd.).

Halcyon javana, Cab. & Heine, Mus. Hein. Th. ii. p. 156 (1860,

nec Bodd.).

Halcyon javanica, Cass. Cat. Halc. Phil. Mus. p. 11 (1852, nec Shaw).

Halcyon javana (part.), Pelz. Reise d. Nov. Vög. p. 49 (1865).

Alcedo leucocephala, Horsf. Trans. Linn. Soc. xiii. p. 174 (1822,

nec Gm.).

Halcyon leucocephalus, Blyth, Cat. Birds Mus. As. Soc. Beng. p. 46 (1849); Bonap. Consp. Gen. Av. i. p. 154 (1850); Horsf. & Moore, Cat. Birds Mus. E.-I. Co. i. p. 123 (1854, pt.); Moore, P. Z. S. 1854, p. 268.

Burong-Kaha of the natives of the Malay peninsula (Eyton).

Tengke-Buto of the Javans (Horsfield).

Head indistinctly capped, ashy brown, strongly washed with pale ochre; space between the bill and the eye, cheeks, and ear-coverts more decidedly ashy grey; sides and back of the neck ochre; upper part of the back and scapularies indigo-blue, with more or less of a greenish tinge; whole of the back rich cobalt; wing-coverts blue, with a slight greenish lustre; quills pale brown, the inner web light ochre at the base, the outer web, especially of the secondaries, indigo; tail indigo above, black beneath; under surface of the body ochre, tinged with whitish on the throat; bill dark sealing-wax red; feet dark red. Total length 14 inches, of bill from front 3·3, from gape 3·7, wing 6·2, tail 3·8, tarsus 0·45, middle toe 1, hind toe 0·45.

Hab. Java (Horsfield, Wallace); Malacca (mus. R. B. S.); Penang (Cantor; mus. R. B. S.).

#### a. Sumatran race.

Alcedo leucocephala, Raffl. Trans. Linn. Soc. xiii. p. 293 (1822). Baug Kaha of the natives of Sumatra (Raffles).

Hab. Sumatra (Raffles, Wallace).

The Sumatran race of *P. fraseri* is much smaller, the blues slightly more intense, but the bird appears to be not specifically separable.

Proc. Zool. Soc.—1870, No. V.

After carefully comparing a skin of the adult Javan bird with Brisson's elaborate description, I believe that his "Ispida capitis bonæ spei" was really taken from a Javan specimen. Consequently the species stands primarily as Alcedo capensis, Linn. But in the face of the manifest incongruity of such an appellation, I believe myself justified in proposing a new name for the bird, and I therefore take the opportunity of connecting with it the name of my friend Mr. W. T. Fraser, of Soerabaya, Java, to whom I am indebted for many kind remittances of Javan Kingfishers.

It is very seldom that we meet with a specimen of P. fraseri with any thing like a distinct cap. Mr. Wallace's collection, however, contains a specimen obtained by himself in Eastern Java which has the cap very distinct, like the bird figured by Professor Reichenbach (l. c.). The species, however, differs from P. burmanica by always having an admixture of ochre, sometimes very distinct, in the feathers

of the head.

#### 6. Pelargopsis gurial.

Halcyon gurial, Pears. Journ. As. Soc. Beng. 1841, p. 633 (descr. orig.); Blyth, Cat. Birds Mus. As. Soc. Beng. p. 47 (1849); Bonap. Consp. Gen. Av. i. p. 155 (1850); Irby, Ibis, 1861, p. 228; Blyth, Ibis, 1865, p. 30.

Ramphalcyon gurial, Reich. Handb. Alced. p. 16, t. ccccxxvi.

(1851).

Pelargopsis gurial, Cab. & Heine, Mus. Hein. Th. ii. p. 156 (1860).

Halcyon capensis, Jerd. Madr. Journ. 1840, p. 231; Blyth, Ann.

Nat. Hist. xii. p. 94 (1843).

Halcyon brunniceps, Jerd. Madr. Journ. 1844, p. 143.

Halcyon leucocephalus (part.), Horsf. & Moore, Cat. Birds Mus.

E.-I. Co. p. 123 (1854).

Halcyon leucocephalus, Jerdon, Birds of India, i. p. 222 (1862); Day, Land of Perm. p. 460 (1863); Beav. Ibis, 1865, p. 407; Blyth, Ibis, 1866, p. 347.

Gurial of the Bengalese (Pearson).

Mala-poyma of the natives of Malabar (Jerdon).

Head dark chocolate-brown; sides of the neck and a collar encircling the same pale ochre; upper portion of the back and scapularies dull green; rest of the back rich greenish cobalt; wingcoverts dull green with a faint blue lustre; quills black, the inner web yellowish white at the base, the outer edge of the whole of the feathers greenish blue; tail greenish blue above, black beneath; under surface of the body ochre, palest on the throat; bill very dark sealing-wax red; feet dull red. Total length 14 inches, of bill from front 3.1, from gape 3.7, wing 6.4, tail 3.6, tarsus 0.5, middle toe 1.1, hind toe 0.5.

Hab. All India, from the extreme south to Bengal and Ceylon; common in Malabar; rarely seen in the Carnatic and upon the tableland; occasionally found in Central India and the Northern Circars;

most abundant in Bengal, but apparently not found, or rare, in the north-west (Jerdon).

a. Assamese and Nepaulese race, with the head a little lighter brown.

Halcyon leucocephalus, Horsf. P. Z. S. 1839, p. 156; Gray, Cat. Fiss. Brit. Mus. p. 55 (1848, pt.); Horsf. & Moore, Cat. Birds Mus. E.-I. Co. p. 123 (1854).

Halcyon capensis, J. E. & G. R. Gray, Cat. Birds and Mamm. of

Nep. p. 56 (1846).

Halcyon gurial, J. E. & G. R. Gray, Cat. Birds and Mamm. of Nep. p. 24 (1863).

b. Malacca race. Much smaller. Head much darker and generally glossed, sometimes also a slight blue lustre being apparent.

This race must ultimately be separated specifically, and I name it provisionally *Pelargopsis malaccensis*. Its nearest ally is *P. gurial*; but it is altogether smaller, the blues are always much brighter, and it must be remembered that true *P. gurial* never really approaches the range of this Malacca bird. Between the ranges of the two spe-

cies intervene P. burmanica and P. amauroptera.

Professor Schlegel states, in his "Catalogue," that a Nepaulese specimen in the Leyden Museum is "absolument semblable aux individus de Java." This statement, which seems to have taken Mr. Blyth by surprise (vide 'Ibis,' 1866, p. 347), certainly astonished me considerably. I think, however, that there must be a mistake in the labels of the specimens examined by the learned Professor; for I have in my collection a Stork-billed Kingfisher from Assam, which agrees in every respect with specimens in the British Museum from Nepaul, presented by Mr. Hodgson, from whom also Professor Schlegel obtained his specimen. These birds differ a little in the colour of the cap, which is a shade lighter brown than in true P. gurial from India, but I have never seen an adult Javan specimen with such a clearly defined cap.

Reichenbach, in the letterpress of his work, refers to "t. cccxcix. fig. 3075" as being the figure of Ramphalcyon gurial. This is a mistake, as this figure is a copy of Buffon's plate 757 (P. leucoce-phalus of this paper), and the reference given in the list of plates to Reichenbach's work, viz. "t. ccccxxvi. fig. 3158" is really the re-

presentation of R. gurial.

# 7. Pelargopsis burmanica, sp. n.

Halcyon leucocephalus, Gould, P. Z. S. 1859, pp. 151, 152; Schomb. Ibis, 1864, p. 247; Beav. Ibis, 1866, p. 221; Walden, P. Z. S. 1866, p. 553; Beav. Ibis, 1867, p. 318.

Halcyon leucocephalus (part.), Horsf. & Moore, Cat. Birds Mus.

E.-I. Co. i. p. 123 (1854).

? Ramphalcyon capensis, Reich. Handb. Alced. p. 16, t. cccxcix. f. 3072, 3073 (1851).

Head, which is distinctly capped, clear albescent grey; sides of the neck and a collar encircling the same very deep ochre; upper part of

the back and scapularies dull green, with a faint blue lustre here and there; whole of the back very rich cobalt; wing-coverts greenish, more distinctly washed with blue; quills brown, the inner web pale ochre at the base, the exterior web, especially of the secondaries, externally edged with bright blue; tail bright blue above, dark brown beneath; entire under surface very deep ochre; bill dark vermilion; feet dark red. Total length 14 inches, of bill from front 3.4, from gape 3.7, wing 6, tail 3.8, tarsus 0.5, middle toe 1, hind toe 0.5.

Hab. Tavoy, Tenasserim Provinces (Briggs); Burmah (Blyth; mus. Lord Walden); Siam (Schomburgk; Mouhot, mus. J. Gould);

Andaman Islands (Tytler, Beavan).

This species may be distinguished at a glance by the colouring of the cap, which is always of a light grey, very different from the dark brown cap of *P. gurial*. Its principal habitat seems to be Burmah, whence it ranges into Siam to the eastward, and perhaps into the

Malayan peninsula to the southward.

The plates of Reichenbach's work are so inaccurate that it is only doubtfully that I refer the figures given in his 'Tabulæ' to the present species. Its range is stated by him to be the Cape of Good Hope, South and South-eastern Africa generally (Dresden Museum), which statement naturally does not aid one in a correct determination of the locality of the specimens figured.

8. Pelargopsis floresiana, sp. nov. Flores Kingfisher.

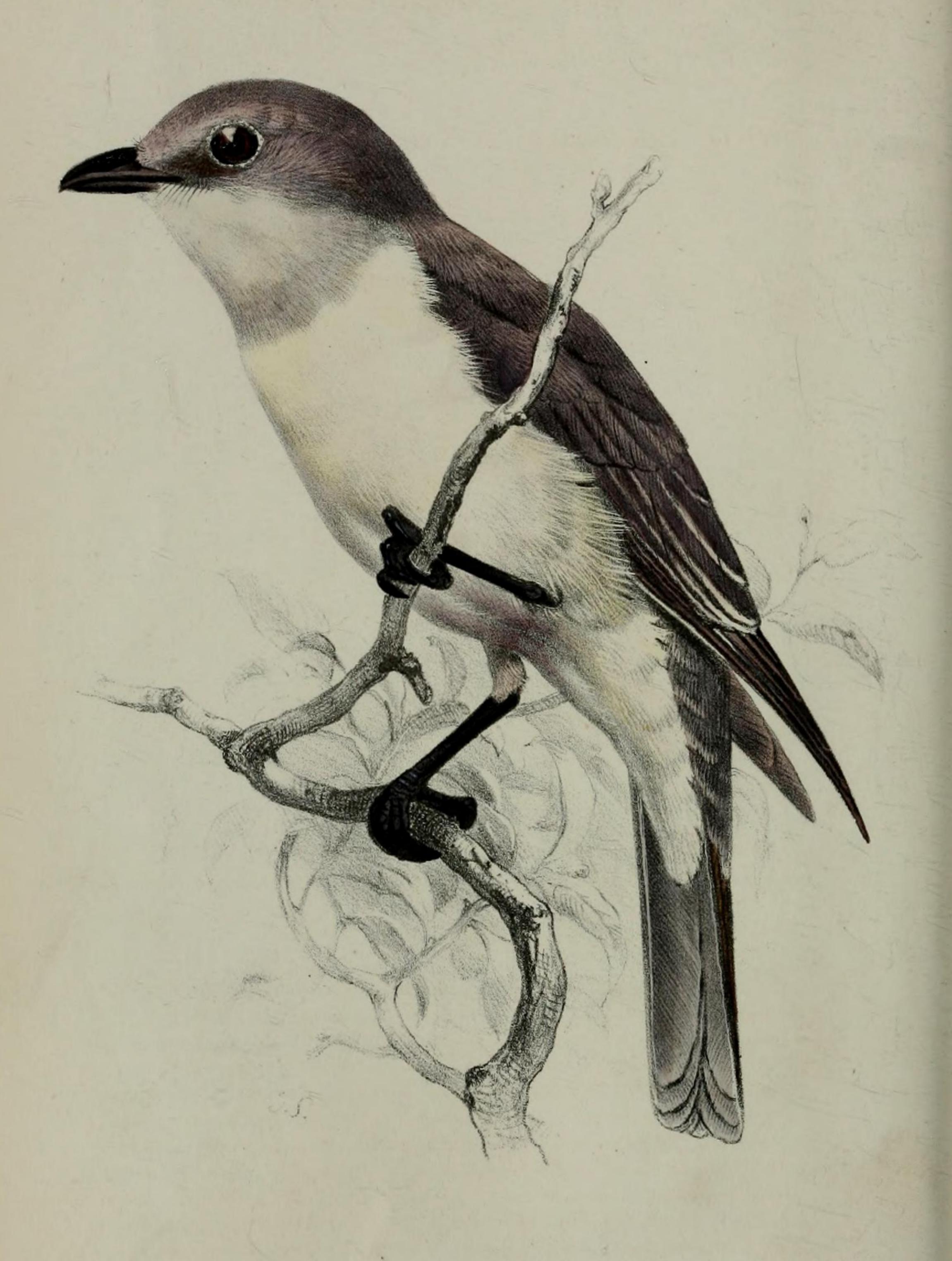
Martin-pêcheur du Cap de Bonne Espérance, Buff. Pl. Enl. 590. Halcyon leucocephalus, Wald. P. Z. S. 1863, p. 484 (nec Gm.). Halcyon capensis, Swains. Classif. of B. ii. p. 335 (1837, nec Linn.).

Head (distinctly capped) pale brown, with a bluish-green lustre; cheeks, sides of the neck, and a collar encircling the back of the neck pale ochre; upper part of the back and scapularies ultramarine with a tinge of green; back rich cobalt, deepening into ultramarine on the rump and upper tail-coverts; quills brownish black, the inner web pale ochre at the base, the outer web, especially of the secondaries, washed with blue; tail rich blue above, black beneath; under surface of the body deep ochre, much paler on the throat; bill dark sealing-wax red, black at the tip; feet dark red. Total length 13.5 inches, of bill from front 3.2, from gape 3.7, wing 5.7, tail 3.6, tarsus 0.45, middle toe 1, hind toe 0.45.

Hab. Flores (Wallace).

In all specimens of the Stork-billed Kingfisher that I have examined from the island of Flores, there has always been a very distinct greenish lustre on the head; and as the colour of the cap is always a pale brown, and these characters appear to be constant, I do not hesitate to separate it specifically.

Buffon's plate represents the bird with a green head; I have carefully compared an adult Flores specimen with the description given by him, and it agrees very well indeed; so that I think it extremely probable that the present species formed the subject of his plate. I



J.Smitlith

M& N Hanhart imp

do not consider Buffon's Martin-pêcheur du Cap de Bonne Espérance to be the same bird as Brisson's "Ispida capitis bonæ spei" (= A. capensis, Linn.); and I think it probable that Buffon hastily referred his bird to Brisson's species, the exact localities of both being unknown.

Table of the Geographical Distribution of the Genus Pelargopsis.

	Indian Region.												Australian Region.							
	Indian Asia.				Chinese Asia.					Indo-Malay Islands.						Cele- bes.		Timor group.		
	India.	Ceylon	Nepaul.	Assam.	Arakan.	Andaman Isl.	Burmah.	Siam.	Tenasserim pr.	Malacca and	Singapore.	Sumatra.	Java.	Borneo.	Philippines.	Celebes.	Sula Island.	Lombok.	Flores.	Timor.
1. P. melanoryncha 2. P. amauroptera 3. P. gouldi 4. P. leucocephala 5. P. fraseri a. Sumatran race b. Malaccan race b. Malaccan race (P. malaccensis) 7. P. burmanica	* *	···· *	***	* *	*				*		*					*	*			
8. P. floresiana								1			•••				1				*	1

5. On Campephaga anderssoni, an apparently undescribed Species of this Genus from South-western Africa. By R. B. Sharpe.

(Plate IV.)

In the last collection made by the late Mr. C. J. Andersson from Damara Land and the adjacent district of Ovampo, I found the bird which forms the subject of the present paper. So far as I can make out, it is not included by Dr. Hartlaub in his elaborate paper on the Campephaginæ ("Monographische Studien über die Gruppe der Campephaginen, von Dr. G. Hartlaub," Journ. f. Orn. 1865, p. 153). According to the descriptions given in the learned doctor's monograph, the Damara bird would appear to be closely allied to Campephaga frenata (Heugl. Journ. f. Orn. 1864, p. 255) from the Bogos country; but it differs conspicuously in the colour of the throat. I therefore propose to call it after Mr. Andersson, whose untimely