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BIRDS COLLECTED DURING THE WHITNEY SOUTH SEA EXPEDITION. XVI¹

NOTES ON FANTAILS OF THE GENUS RHIPIDURA

BY ERNST MAYR

The collections sent by the Whitney Expedition from Malaita Island (British Solomon Islands) included three new forms of fantails of the genus *Rhipidura*. The description of these necessitated an examination of some of the related forms. The species and subspecies that are distributed over the western part of the range of this genus (Indian, Malayan, Australian and Papuan Region) have been recently reviewed by several authors. However, little is known about the eastern species (inhabiting Melanesia and Polynesia). The splendid material of the Whitney Expedition adds a great deal to our knowledge on distribution and geographical variation of this group and gives me a welcome opportunity for this much needed revision. About 1100 specimens belonging to 34 different subspecies from more than 60 islands were studied and measured during the preparation of the present paper.

I distinguish in the region of Polynesia and the Solomon Islands the following eight species of the genus *Rhipidura*:

- $1. -Rhipidura\ leucophrys$
- 2.—Rhipidura cockerelli
- 3.—Rhipidura spilodera (superspecies²)
- 4.—Rhipidura nebulosa
- 5.—Rhipidura flabellifera
- 6.—Rhipidura personata
- 7.—Rhipidura rufifrons (superspecies²)
- 8.—Rhipidura malaitæ

Three of these (1, 2, 8) are found only in the Solomon Islands and not in Polynesia, one is restricted to Polynesia (4), but is perhaps nothing more than a representative of another species (3 or 5). The distribution of these eight species is somewhat irregular, but we find in Polynesia never more than two and in the Solomon Islands never more than four on any one island.

¹Previous papers in this series comprise American Museum Novitates, Nos. 115, 124, 149, 322, 337, 350, 356, 364, 365, 370, 419, 469, 486, 488 and 489.

²Concerning the term superspecies, see Mayr, 1931, Amer. Mus. Novit. No. 469, p. 2.

Only one species is found in Samoa (4), Fiji (3 or 6), Santa Cruz (7) and on Rennell Island (3). Two species are found in New Caledonia (3 and 5), New Hebrides (3 and 5) and Banks Island (3 and 5). Three species are found on Choiseul, Ysabel, Central Solomon Islands and Florida Island (1, 2 and 7). Four species are known only from Bougainville (1, 2, 3 and 7), Malaita (1, 2, 7 and 8), Guadalcanar (1, 2, 3 and 7) and San Cristobal Island (1, 3, 5 and 7). But, even where we find four species on the same island, we will not meet them all at the same locality. Some are strictly mountain birds, others occur only near the water or have some other specialized habitat. Further details will be given in the full report on the Solomon Islands birds. For the present I want to point out only one curious fact and that is that within the species there are considerable differences in the ecological position. We have several species (for example rufifrons and spilodera) that are mountain birds on some islands, but occur also on small, low coral islands. We find the same phenomenon with Turdus poliocephalus1 and in some species of Zosterops.² I lay particular stress on the importance of this phenomenon. as several systematists have claimed that preference for a certain type of habitat can always be used for the distinction between closely related species.

Rhipidura leucophrys Latham

RANGE.—Australia, Moluccas, Papuan Region, Bismarck Archipelago and Solomon Islands.

Rhipidura leucophrys melaleuca (Quoy and Gaimard)

Muscipeta melaleuca Quoy and Gaimard, 1830, 'Voyage de l'Astrolabe,' Zool. I, p. 180; New Ireland.

Leucocirca leucophrys amboynensis Mathews, 1928, Bull. Brit. Orn. Club, XLVIII, p. 92; Amboyna, S. Moluccas.

Male and female alike in coloration, but female smaller.

JUVENAL PLUMAGE.—Duller, less glossy; upper wing-coverts with brownish edges.

· ·	Wing	TAIL	WEIGHT
24 ♂ ad.	103-110(106.4)	100-106(103.1)	37
16 ♀ ad.	99-104(101.6)	96-106(101.1)	35, 33
8 ♂ juv.	101-104(102.1)	95-101(99.0)	31
7 Ω iuv.	95-100(97.7)	90- 98(95.8)	34

Most of the molting specimens were collected from December to April, although a few molting birds were found during every month of the year.

¹Mayr, 1931, Amer. Mus. Novit., No. 486, p. 22. *Stresemann, 1931, Mitt. Zool. Mus. Berlin, XVII, p. 204.

Specimens Examined (Whitney South Sea Expedition).—From Solomon Islands: Poharan Island (near Buka); Bougainville Island; Shortland Island; Whitney Island; Choiseul Island; Ysabel Island; islands on the north coast of Ysabel (Gijunabena, Megapode, Bates Isls.); Vella Lavella; Bagga Island; Ganonga; Narovo; Gizo; Kulambangra; New Georgia; Tetipari; Kicha Island (east of Gatukai). Malaita; Tulagi; Guadalcanar; San Cristobal; Santa Anna and Ugi Island.

Compared with a series from New Britain and different parts of New Guinea.

There are no differences in coloration or size between the birds from these twenty-four islands of the Solomon Group. In a comparison of my measurements with those published by other authors, I find that I can do nothing better than to follow the arrangement proposed by Ogilvie-Grant (1915, Ibis, Supp. 2, p. 156), Stresemann (1923, Arch. f. Naturg. LXXXIX, fasc. 8, p. 5) and Hartert (1930, Nov. Zool., XXXVI, p. 74), who consider all the birds between the Moluccas and Solomon Islands as belonging to one subspecies. It may be noted, however, that the specimens from South New Guinea and Aru Island are, on the average, slightly smaller and approach somewhat the smaller picata Gould of Northwest Australia.

Rhipidura cockerelli Ramsay

RANGE.—The Solomon Islands, except San Cristobal Island.

Rhipidura cockerelli septentrionalis Rothschild and Hartert

Rhipidura cockerelli septentrionalis Rothschild and Hartert, 1916, Bull. Brit. Orn. Club, XXXVI, p. 73; Bougainville Island.

Subspecific Characters.—Similar to cockerelli, but white spots on the breast averaging larger; more white on under wing-coverts and secondaries; back less blackish.

	Wing	TAIL
19♂ ad.	89-94(91.9)	82-87(83.5)
7 ♀ ad.	82-89(85.9)	74-82(79.6)
5♂ juv.	82-89(85.2)	78, 82
3 ♀ juv.	80, 82, 86	

RANGE.—Northern Solomon Islands (Buka, Bougainville and Shortland Island).

When Rothschild and Hartert described this form, they did not have sufficient material, especially adult males. Thus, the main character (smaller size), as compared with *cockerelli*, does not hold.

However, there are some minor characters of coloration which enable us to distinguish the birds from the northern Solomon Islands as a separate subspecies.

Rhipidura cockerelli interposita Rothschild and Hartert

Rhipidura cockerelli interposita Rothschild and Hartert, 1916, Bull. Brit. Orn. Club, XXXVI, p. 73; Ysabel Island.

Subspecific Characters.—Differs from cockerelli and septentrionalis in the greater extent of the white on the inner secondaries, which have the outer webs entirely, the inner largely (about half their length) white; very little or no white on the secondary coverts.

	Wing	TAIL	WEIGHT
Choiseul Island			
18♂ ad.	88-91(89.2)	78-84(79.4)	16-19(17.3)
7 ♀ ad.	82-86(84.6)	75-81(78.3)	18. 5, 19
3♂ juv.	79, 82, 84	75, 78, 79	
2 ♀ juv.	80, 81	7 8	
Ysabel Island			
4 ♂ ad.	88-93(91.0)	79-83(80.8)	
$5 \circ ad.$	83-87(85.0)	75-80(77.0)	
1♂ juv.	83	78	
1 Q juv.	82		

Range.—Northern Solomon Islands (Choiseul and Ysabel Island). The extension of white on the secondaries varies to some degree, but in the series the characters given by Rothschild and Hartert hold quite well.

Rhipidura cockerelli floridana, new subspecies

Type.—No. 217646, Amer. Mus. Nat. Hist.; of ad.; Tulagi Island; May 23, 1927; R. H. Beck and F. P. Drowne.

Subspecific Characters.—Intermediate between interposita and cockerelli; the white on the inner secondaries more restricted than in interposita, but not as much as in cockerelli; tip and inner edge of the three innermost secondaries largely white.

Specimens Examined.—Tulagi Island, $1 \, \circ$; Florida Island $1 \, \circ$, $1 \, \circ$; compared with large series of *interposita* and *cockerelli*.

	Wing	Tail	
2♂ ad.	93, 92	84, 85	
1 9 ad.	84	80	

Rhipidura cockerelli (Ramsay)

Sauloprocta cockerelli RAMSAY, 1879, Proc. Linn. Soc. N.S.W., IV, p. 81; Lango, Guadalcanar.

Subspecific Characters.—Upperside slate-black; white on inner secondaries restricted to the outer webs and tips of inner webs; white spots on breast medium-sized.

	Wing	TAIL
14♂ ad.	89-95(91.7)	80-87(84.0)
9♀ ad.	82-86(84.8)	77-81(79.1)
4♂ juv.	84-87(85.5)	77-84(81.2)
2 ♀juv.	81, 82	77, 78

Range.—Guadalcanar Island, British Solomon Islands.

Rhipidura cockerelli coultasi, new subspecies

Type.—No. 226926, Amer. Mus. Nat. Hist.; \circlearrowleft ad.; Malaita Island, British Solomon Islands; April 8, 1930; W. F. Coultas and W. J. Eyerdam.

Subspecific Characters.—Very different from cockerelli; larger, back gray, not black, inner secondaries brownish black, with a very narrow whitish edge; lower throat white, not black; drop-shaped spots on the breast larger.

ADULT (male and female).—Forehead, crown, neck, lores, upper cheeks, ear-coverts and sides of neck black; scapulars and back dark gray, lighter toward the rump; upper tail-coverts dusky gray with blackish edges; chin black, feathers of upper throat with narrow white tips; lower throat white; breast-feathers black with large drop-shaped white spots; belly, flanks and under tail-coverts white; thighs blackish; axillaries and under wing-coverts dark grayish with white tips; wing and tail blackish; outermost tail-feather with whitish tip; wing-coverts with narrow pale tips; innermost secondaries with narrow whitish edge; exposed culmen, 15–16; bill (from nostril), 12; tarsus, 16–17 mm.

	. Wing	TAIL	WEIGHT		
♂ad.	94-99(96.0)	87-96(91.0)	20 -22 (21.0)		
φ ad.	88-93(90.3)	82-90(86.9)	18.5-21.5(20.2)		
♂ juv.	92, 93	91, 91	20.5, 24.5		
♀ juv.	85-91(89.2)	85, 86, 87	19 -23 (20.5)		

Most birds (coll. January to April) are in fresh plumage or just completing their molt.

RANGE.—Malaita Island, British Solomon Islands.

This very distinct subspecies shows several peculiarities not found in any of the other forms of the species.

Rhipidura cockerelli albina Rothschild and Hartert

Rhipidura albina Rothschild and Hartert, 1901, Nov. Zool., VIII, p. 183; Kulambangra Island.

Rhipidura cockerelli albina Rothschild and Hartert, 1916, Bull. Brit. Orn. Club, XXXVI, p. 73.

Subspecific Characters.—Similar to cockerelli, but breast almost uniformly black, only on lower edge with narrow (or sometimes drop-shaped) white shaft stripes; back slaty black; white edges on secondaries narrower; outermost tail-feather usually with whitish spot on the tip; larger; many specimens of this subspecies have a pale ochraceous tinge on the white edges of the secondaries.

	Wing	TAIL
Kulambangra		
7♂ ad.	90-97(93.6)	83-89(86.4)
$2 \circ ad.$	90, 91	84, 84
1♂ juv.	85	•
2 ♀ juv.	84, 90	80, 84
New Georgia		
16♂ ad.	89-96(91.0)	81-87(83.5)
$5 \ \mathbf{ad}$.	85-87(86.2)	78-83(80.8)
3♂ juv.	83, 84, 86	79, 82, 82
1 ♀ juv.	80	79
Vangunu		
12 ♂ ad.	90-96(93.5)	83-87(85.5)
3 ♀ ad.	86, 87, 88	78, 83, 83
Rendova		
9♂ ad.	88-95(91.4)	82-87(84.7)
$3 \circ ad.$	86, 88, 88	80, 82, 82
Tetipari		
3♂ ad.	89, 91, 93	84, 86, 86
3 ♂ ad.	84, 87, 88	80, 81, 81
1 ♀ juv.	86	80

Range.—Eastern part of central group of the Solomon Islands (Kulambangra, New Georgia, Vangunu, Rendova and Tetipari Island).

This subspecies was originally described as a species belonging to the Sauloprocta-section of the genus Rhipidura, but this error was corrected later by the authors (1916) and the bird properly placed as representative of cockerelli. Of this subspecies there were, so far as known, only four specimens in the Tring Museum, the type and three birds from Rendova. Rothschild and Hartert consider the possibility that the Rendova birds belong to a smaller subspecies, as the three specimens from that locality revealed considerably smaller measurements than the type from Kulambangra. To show that this supposed difference is only very slight, I give, in full, the measurements of the Whitney series from the five islands of its range. The whitish line along the tip of the outermost tail-feather is not peculiar to Rendova birds, but also found in a good many specimens from other islands. However, specimens from Rendova and Tetipari have the lower breast more strongly spotted, on the average, than birds from Kulambangra. But, as there is a great deal of individual variation (most specimens can not be identified without questioning the label), and as the Vangunu and New Georgia specimens are intermediate, I do not venture to separate the specimens from Rendova and Tetipari Islands as a different subspecies.

There seems to be a tendency toward albinism in the species

Rhipidura cockerelli. Rothschild and Hartert described it from the type of albina, but I have seen specimens with a few white feathers on head and hindneck in most of the subspecies.

Rhipidura cockerelli lavellæ Rothschild and Hartert

Rhipidura cockerelli lavellæ Rothschild and Hartert, 1916, Bull. Brit. Orn. Club, XXXVI, p. 74; Vella Lavella Island.

Subspecific Characters.—Similar to cockerelli, but white spots on the breast smaller; back grayish, but not quite so light as in coultasi; white edges to the secondaries narrower.

		Wing	TAIL
Vella Lav	ella		
16♂	ad.	89-93(90.4)	80-86(82.8)
. 10 ♀	ad.	84-88(85.4)	78-83(80.0)
3♂	juv.	81, 85, 85	77, 80, 80
Ganonga			
2σ	ad.	89, 90	80, 81
1♀	ad.	87	80
3♂	juv.	81, 82, 84	80, 80

Range.—Western part of central group of the Solomon Islands (Vella Lavella and Ganonga).

All the specimens (coll. October and November) are either worn or have begun their molt, which seems to take place mainly from November to January in all the subspecies of this species, although single molting birds can be found during any month.

The birds from Ganonga Island do not seem to be quite identical with Vella Lavella birds. The back is slightly darker, the white spots on the breast smaller, and the black on breast and flanks more extended. My material is too limited to decide whether this difference is of any systematic value.

Superspecies Rhipidura spilodera

This superspecies contains several representative forms that are fairly similar in the eastern part of the range, so that they may safely be considered as subspecies. In the west, especially on the mountains of the Solomon Islands, these forms have developed a definitely different appearance so that they are better kept as representative species. Furthermore, some of them, as rennelliana, inhabit low coral islands, while others, as drownei, are found only on higher mountain ranges. Most of the forms are found both in the lowland and on mountains, but only on larger islands with considerable elevations.

I regard four species as members of the superspecies Rhipidura spilodera: Rhipidura spilodera, Rhipidura rennelliana, Rhipidura drownei, and Rhipidura tenebrosa.

Rhipidura spilodera Gray

RANGE.—Fiji Islands, Banks Group, New Hebrides, and New Caledonia.

Rhipidura spilodera rufilateralis Sharpe

Rhipidura rufilateralis Sharpe, 1879, 'Cat. Birds Brit. Mus.,' IV, p. 337; Taviuni Island. For:

Rhipidura albicollis E. L. LAYARD, 1876, Ibis, p. 149; Taviuni Island (nomen nudum).

Subspecific Characters.—Head darker and duller than back, spotting of the breast reduced, spots rufous brown, not grayish; flanks and sides of breast strongly washed with rufous.

	WING	TAIL
6♂ ad.	77-80(78.3)	80-81(80.5)
8 ♀ ad.	74-80(76.5)	77-81(79.6)
2♂ juv.	72, 73	

These specimens were collected in December and are either molting or very worn.

RANGE.—Taviuni Island, Fiji Group.

Rhipidura spilodera erythronota Sharpe

Rhipidura erythronota Sharpe, 1879, 'Cat. Birds Brit. Mus.,' IV, p. 337; Vanua Levu Island (Fiji).

Subspecific Characters.—Back and rump very rufous, strongly contrasting against the fuscous head; breast spotted with grayish brown; belly and flanks buffy.

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Vanua Levu (Dec., 1924, Jan	n., 1925)	
, 7♂ ad.	79-85(81.7)	82-86(85.2)
1 ♀ ad.	7 8	82
6♂ juv.	69-77(73.0)	73-84(80.0)
3♀ juv.	72, 73, 74	78, 79, 82
Yanganga Island (Jan., 192	5)	
2σ ad.	76, 77	79, 79
1 ♀ ad.	72	78
2 ♀ juv.	69, 71	78, 79
Kio Island (Dec., 1924)		
1 ♀ ad.	79	83

Birds from Yanganga Island (on the northeast coast of Vanua Levu) average smaller than typical *erythronota*, but agree in coloration. The material is not sufficient to warrant a separation.

RANGE.—Vanua Levu and neighboring islands, Fiji Group.

Rhipidura spilodera layardi Salvadori

Rhipidura layardi Salvadori, 1877, Ibis, p. 143. New name for:

Rhipidura albogularis LAYARD, 1875, Proc. Zool. Soc. London, p. 29; Ovalau Island (Fiji). Preoccupied by

Muscicapa (Muscylva) albogularis Lesson, 1832, in Belanger, 'Voy. Ind. Orient.,' p. 264 = Rhipidura albicollis Vieillot.

Subspecific Characters.—Breast feathers with broad, blackish shaft-stripes, back dull grayish-brown, not sharply contrasting against the head.

	Wing	TAIL
Ovalau Island		
$1 \nearrow ad$.	82	87
$1 \circ ad.$	76	81
1♀ juv.	75	82
Viti Levu Island		
9♂ ad.	79-83(80.9)	80-89(84.3)
11 ♀ ad.	75-79(77.3)	77-85(81.4)
2♂ juv.	73, 77	77, 81
2 ♀ juv.	76, 77	82, 85

There is no difference between specimens from Ovalau and Viti Levu.

RANGE.—Ovalau Island and Viti Levu, Fiji Group.

Rhipidura spilodera spilodera Gray

Rhipidura spilodera G. R. Gray, 1870, Ann. Mag. Nat. Hist., (4) V, p. 330; Vanua Lava, Banks Islands.

Rhipidura sancta Sharpe, 1899, Bull. Brit. Orn. Club, X, p. 29 (also 1900, Ibis, p. 364); Espiritu Santo, New Hebrides.

Subspecific Characters.—White feathers of breast with large triangular spots; back dusky olive-cinnamon brown, more rufous toward the rump; belly buffy; wing-coverts without white tips; white edges of outer tail-feathers gradually merging into the grayish centers.

		Wing	TAIL		Wing	TAIL
New Hebrides						
Efate	♂	82-85(83.3)	90-95(92.5)	φ	75–81(78.0)	85-93(89.2)
Mai	♂	80-86(83.8)	91 - 95(93.3)	Q	78-79(78.5)	90-94(91.2)
Tongariki	♂			Q	80	91
Tongoa	♂	83	93	Q	76, 77, 80	88, 91
$\mathbf{E}\mathbf{p}\mathbf{i}$	♂	81, 85	90, 93	Q	76, 79	87, 90
Pauuma	♂	83	90	Q	78-80(79.3)	88, 89, 92
Malekula	♂	80-86(83.3)	87-94(90.8)	Q	75-80(77.8)	87-91(89.0)
\mathbf{Ambrym}	♂	83	90	φ	75	87
Pentecost	♂			Q	7 9, 7 9	91, 93
Aoba	♂	82, 82, 82		Q	79	
Santo	♂	79-82(80.5)	85-91(88.2)	Q	74-79(76.3)	84-89(86.6)
Banks Islands						
Gaua	♂	81-85(82.6)	87-90(88.4)	Q	75–80(77.8)	85-89(86.6)
Vanua Lava	♂	81-87(83.5)	88, 82, 96	Q	78-80(79.0)	87, 87, 90

Range.—New Hebrides and Banks Group (above-listed islands).

The birds from the thirteen listed islands do not form an entirely uniform population. Specimens from the southern islands (Efate, etc.) as compared with topotypical spilodera tend to have the belly more richly washed with ochraceous buff, the back of a warmer cinnamon, and the breast of a lighter appearance due to broader white edges on the feathers. Single specimens can not be classified, but in the series a slight difference is apparent. Specimens from Santo Island (type locality of sancta Sharpe) are intermediate. Most of the differences just described seem to have been caused by wear. The Whitney specimens from the Banks Islands and northernmost New Hebrides were collected late in the season (Nov.-Jan.) and the buff of the belly has bleached while the white tips of the breast-feathers have been partially worn off. The birds from Efate and the other southern islands were collected from June to August and are therefore in fresh plumage.

As both the types of *spilodera* and *sancta* are in the British Museum, I sent part of our own series to Mr. N. B. Kinnear. I am greatly indebted to him for the following extensive notes, which he gave me concerning the British Museum material:

These two birds agree very closely with your male and female from Santo, Sept. 1st, Nos. 213980 and 213983, and practically the only difference that strikes one is the color of the belly which seems rather darker; that, I think, is due to the fact that our birds are not such well-made skins as yours and have less stuffing in them; the buff feathers on the flanks show up on the belly and give the darker appearance.

I do not know why Sharpe compared these birds with *verreauxi*, as we had the type of *spilodera* to compare them with when he described *sancta*. Partly on account of the make-up, the type of *spilodera* has a very dark appearance on the under side, the breast being stuffed out and bunched up towards the throat, exposing the dark centres of the feathers. It agrees best with your Vanua Lava skin No. 216390, but the white is rather discolored and dirty. Individual feathers on the breast do not appear to have much less white than in your Santo birds but, owing to the discolouration and over-stuffing, appear darker.

The amount of black showing on our two Santo birds is no more, for instance, than is found on your two Vanua Lava birds, Nos. 215810 and 215805, but the belly is distinctly more ochraceous buff.

On the other hand, our single skin from Vanua Lava (August) is no darker than your Santo bird (August), No. 213986. I should therefore, even with these slight differences, be inclined to sink sancta.

Rhipidura spilodera verreauxi Marie

Rhipidura verreauxi Marie, 1870, Actes Soc. Linn. Bordeaux, XXVII, p. 326; New Caledonia. [Type examined, No. 7896, Amer. Mus. Nat. Hist., ex Verreaux Coll.] Subspecific Characters.—Similar to spilodera, but white edges of feathers on breast much narrower; back more rufous; wing-coverts with white tips.

Range.1—New Caledonia and (?) Loyalty Islands.

Rhipidura rennelliana Mayr

Rhipidura rennelliana Mayr, 1931, Amer. Mus. Nov it. No. 486, p. 25; Rennell Island.

Specific Characters.—Uniformity of coloration; all distinct marks of the related species (as white supraloral spot, white throat, dark drop-like spots on the breast and white tips on the wing-coverts) only indicated.

Range.—Rennell Island.

For details see original description.

Rhipidura drownei, new species

Specific Characters.—White supraloral spot well developed; throat whitish; breast mottled; central tail-feathers uniformly colored, outer with light edges.

Range.—Mountains of Bougainville and Guadaleanar, Solomon Islands.

This species is somewhat similar to *Rhipidura rennelliana*, but on account of the morphological differences and the different habitat it seems to be safer to regard it as specifically different.

Rhipidura drownei drownei, new subspecies

Type.—No. 225358, Amer. Mus. Nat. Hist.; of ad.; Bougainville Island, Solomon Islands; Jan. 5, 1928; F. P. Drowne.

Subspecific Characters.—Plumage of back, wings, tail, breast and belly washed with ochraceous buff; postocular stripe only indicated by a few white feathers; wing-coverts with broad buffy or ochraceous tips.

ADULT (male and female).—Crown dark mouse-gray (R.LI), sides of head lighter; part of forehead, supraloral region and superciliary stripe white; scapulars and back dusky olive-brown, lighter and more brownish toward the rump; feathers of chin, throat and lower cheeks white with gray bases, on lower throat with buffy gray bases; centers of breast-feathers grayish hair-brown with narrow buff edges which almost disappear on the side of the breast; middle of the abdomen pinkish buff (R.XXIX), flanks buffy gray; under tail-coverts dull cinnamon-buff; thighs gray, feathers with buffy tips; axillaries with grayish bases and broad buffy tips; wing-feathers brown, coverts darker; primaries, except the two outer ones, with dark cinnamon edges on the outer web; edges and tips of secondaries similar, but brighter; greater upper wing-coverts with large, middle upper wing-coverts with smaller buffy-cinnamon tips; upper tail-coverts snuff-brown (R.XXIX); central tail-feathers hair-brown with a light olive tinge and without any light edges or tips; second to fifth tail-feathers with increasing extension of light pinkish-cinnamon (R.XXIX) on tip and inner web;

¹For details see Sarasin, 1913, 'Die Vögel Neu-Caledoniens,' p. 19.

outermost tail-feather similar, but outer web entirely pinkish buff; shaft of the outermost tail-feather buffy cinnamon, on the other tail-feathers more brownish.

JUVENAL.—Similar to adult, but feathers more fluffy; light edges of wing-feathers and coverts broader.

Iris brown, bill blackish, lower mandible whitish with brown tip, feet brown. Bill, 8-9 mm.; tarsus, 17-19 mm.

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	WING	1 AIL
σ ad.	75–80 (77.3)	76-80 (78.1)
♂ juv.	66-75 (72.0)	74, 77, 77
♀ ad.	70–71 (70.5)	73-79(76.4)

Range.—Mountains of Bougainville Island, Solomon Islands.

I name this interesting new species in honor of the late Dr. Frederick P. Drowne, who was the leader of the party of the Whitney South Sea Expedition that successfully explored the mountains of Bougainville Island.

Rhipidura drownei ocularis, new subspecies

Type.—No. 217672, Amer. Mus. Nat. Hist.; Ø ad.; Guadalcanar Island, British Solomon Islands; July 25, 1927; R. H. Beck and F. P. Drowne.

Subspecific Characters.—Similar to *drownei*, but without the cinnamon-buff of underside and tail; distinct white postocular stripe; supraloral spot larger and throat purer white; edges of the feathers on breast and abdomen very pale buffy or whitish; back and edges of wing-feathers less rufescent; tips and edges of the tail-feathers whitish; tips on wing-coverts much reduced.

	WING	TAIL
13 ೆ	71-77(73.1)	72-81(76.1)
6 ♀	66-70(68.0)	73, 78

Range.—Mountains of Guadalcanar Island, British Solomon Islands.

Rhipidura tenebrosa Ramsay

Rhipidura tenebrosa Ramsay, 1882 (March 20), Proc. Linn. Soc. N.S.W., VI, 1881, p. 835; Wannu, San Cristobal.

Specific Characters.—Large; under- and upperside brownish; supraloral and postocular stripe indicated by a few white feathers. Tips of feathers on throat and lower cheeks white; wing-coverts with broad cinnamon tips; tail-feathers (except central pair) with broad, sharply defined, white tips; outer web of outermost tail-feather only white in lower part.

Iris brown, bill above black, lower mandible whitish with gray tip; feet bluish gray.

Bill, 11-12 mm.; tarsus, 21-22 mm.

, -	Wing	TAIL	WEIGHT
5♂ ad.	85-89(86.8)	89, 91, 93	18.5
4♂ juv.	77-84(81.3)	87, 89	17-18(17.5)
9 ♀ ad.	76-80(78.2)	84-88(85.8)	15-17(15.7)
1 ♀ juv.	77	80	

RANGE.—San Cristobal Island, British Solomon Islands.

Specimens collected in April, 1927, are in fresh plumage, those collected in December, 1929, are all in molt.

Thus far, this bird has been considered a very rare species, as only one specimen had been collected (by Meek) since its discovery.

Rhipidura nebulosa Peale

RANGE.—Samoa Islands.

This species is probably another member of the superspecies *Rhipidura spilodera*. However, it has acquired so many distinct characters that it may be more correct not to include it in the *spilodera* group.

Rhipidura nebulosa nebulosa Peale

Rhipidura nebulosa Peale, 1848, 'U. S. Explor. Exped.,' Birds, p. 99; Upolu, Samoa.

Rhipidura fuscescens Cabanis and Reichenow, 1876, Journ. f. Orn., p. 319; (Segaar Bay, New Guinea, error for) Upolu, Samoa (see Salvadori, 1877, Proc. Zool. Soc. London, p. 194, and 1889, 'Forschungsreise Gazelle,' III, p. 279).

	Wing	TAIL
11 ♂ ad.	73-76(74.5)	78-84(80.1)
$7 \circ ad.$	71-72(71.5)	75-79(77.2)

RANGE.—Upolu Island, Samoa Islands.

Rhipidura nebulosa altera, new subspecies

Type.—No. 206063, Amer. Mus. Nat. Hist.; o ad.; Savaii Island, Samoa; May 9, 1924; R. H. Beck.

SUBSPECIFIC CHARACTERS.—Similar to nebulosa, but lighter, white marks more pronounced; the white postocular stripe broader and longer; the white supraloral spot more pronounced; most specimens with a distinct whitish throat which is exceptional in nebulosa; buffy area on lower belly more extended; white margins on the tail-feathers broader; smaller.

	Wing	TAIL
9♂ ad.	71-75(72.4)	77-82(79.4)
1♂ juv.	73	79
8♀ ad.	67-74(71.6)	76-80(77.8)
3 ♀ juv.	66, 71, 72	75, 77

RANGE.—Savaii Island, Samoa Islands.

Rhipidura flabellifera Gmelin

Range.—Australia, Tasmania, New Zealand Group, New Caledonia Group, New Hebrides, Banks Islands and San Cristobal (Solomon Islands).

Rhipidura flabellifera brenchleyi Sharpe

Rhipidura brenchleyi Sharpe, 1879, 'Cat. Birds Brit. Mus.,' IV, p. 311; Aneiteum, New Hebrides.

Rhipidura erromangæ Sharpe, 1900, Ibis, p. 340; Erromanga Island, New Hebrides.

Subspecific Characters.—Apparently very similar to *bulgeri*, but ochraceous buff of belly lighter, shafts of central tail-feathers sometimes brownish, not always pure white.

I have seen no material of *bulgeri* and neither Sharpe, in his original description, nor any other author since gives any distinctive characters. The coloring of the shaft of the central tail-feathers varies individually and is not always brown in *brenchleyi* as stated by Sharpe.

		Wing	TAIL		Wing	TAIL
Efate	o ⁿ¹	70-73(71.6)	76-78(76.6)	٩١	64-69(67.5)	68-74(71.5)
Leleppa	♂	72	79	Q	67	74
Mai	♂	72, 75	76, 78	Ŷ	66, 69	73, 75
Tongariki	♂	73, 74	78, 79	Q	69	76
Tongoa	♂	74	77	Q	68, 68, 68	75, 75, 76
Lopevi	♂	73	77	Q.	66, 68, 69	70, 74, 76
\mathbf{Ambrym}	o™.	73, 74	77, 79	Q	67	71
Santo	♂	69-73(71.3)	75-76(75.4)	Q	66-69(67.6)	73, 74, 75
Meralav	♂	73, 73, 74	77,80	₽	67-70(68.6)	74-77(75.2)
Gaua	♂	71-74(72.4)	76-78(77.0)	Q	67-70(68.1)	74-77(75.2)
Vanua Lava	♂	70-75(72.2)	76-79(77.2)	Q	67-69(67.6)	73-75(74.3)
Valua	♂	71, 71, 72	76, 79	Q	69, 70	73, 75
Bligh	♂	71	76	Q	66	
San Cristobal	ď	67, 68, 71	75	Q	65	75

RANGE.—New Hebrides, Banks Islands, and San Cristobal (Solomon Islands).

This bird not only varies a great deal individually, but also changes its appearance considerably during the season. Freshly molted birds have the underside tinged with a warm ochraceous-buff which bleaches to pale buff later in the season, while the upperside gets a brownish tinge due to wear. Two specimens collected in December (1926) on Leleppa Island (near Efate) differ strikingly from the rest of the Efate series, which was collected in June and July. The Leleppa birds agree in every detail with Banks Islands birds which (mostly collected in November) are also worn and faded.

From scanty material Sharpe described in 1900 the fantail from Erromanga Island. As the Whitney Expedition has not collected on the three southern islands of the New Hebrides, and as the distinguishing characters

¹As the sexing of some specimens is not correct, it is possible that the measurements of males and females do not overlap actually.

mentioned by Sharpe in the original description are such that are very apt to vary individually, I sent part of our series to Mr. N. B. Kinnear. After a comparison of our material with that of the British Museum (including the types of brenchleyi and erromangæ), he wrote me the following notes, for which I am greatly indebted:

We have three skins from Aneiteum:-

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1 ♂ collected by Brenchley in August, 1865
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2 Q · " MacGillivray in June, 1859. 3?

No. 2 is considerably darker below than No. 1 and agrees with No. 3 in the richer colour on the underside.

From Erromanga we have:-

These two birds are slightly paler on the under surface than No. 3, Aneiteum, June, and in fact are intermediate between the two dark Aneiteum specimens, Nos. 2 and 3, and the other Aneiteum bird, No. 1.

In regard to the white on the tail, this is very distinct in the Erromango birds (Nos. 4 and 5), on the three outer tail feathers, because the color is a pure white and not a brownish white as in Aneiteum (Nos. 1, 2, and 3) birds. I do not, however, think this is of much account.

Comparing the above June and August birds from Aneiteum and Erromango with your series from Efate I find that the upper surface of the latter has slightly more gray and the former have a browner tinge. This may perhaps be due to the age of the skins.

On the under side Nos. 2, 3, 4, and 5 are distinctly richer and darker than Efate birds, but No. 3 is only slightly darker.

As regards Tanna we have only two skins. One has been in spirit, so is of no account, and the other is only very slightly darker than your Efate skin No. 212509, July 15.

I do not think the Efate and Banks Islands birds can be kept separate, and I agree with you that the best course is to treat erromange as a synonym of brenchleyi and make all the New Hebrides and Banks Islands birds one subspecies.

It was a surprising discovery to find this race in the mountains of San Cristobal Islands (British Solomon Islands). The four specimens collected (Dec., 1929) are partly very worn, partly in molt. A series of fresh birds must be collected before anything can be said about the distinguishing characters of the San Cristobal birds.

Rhipidura personata Ramsay

Rhipidura personata RAMSAY, 1876, Proc. Linn. Soc. N.S.W., I, p. 43; Kandavu Island, Fiji Group.

SPECIFIC CHARACTERS.—Large, with a strong bill; black band across the lower throat not forming a straight line, but triangular-shaped with the point toward the chin; sides of breast cinnamon, rest of underside whitish; tail-feathers brownish black, outer tail-feathers with white tips; the outermost has a narrow white edge on the outer web; shafts of all tail-feathers brownish black, except on the outermost, where it is half brown and half white.

Wing Tail Wing Tail
11♂ 79–84(81.2) 86–91(89.2) 8♀ 74–78(76.0) 84–87(85.8)

RANGE.—Kandavu Island, Fiji Group.

This species resembles *Rhipidura flabellifera* somewhat, but by no means is it certain that it is a representative of it. In other respects it has several features in common with *Rhipidura rufifrons*, and it is therefore necessary to treat this very distinct bird as a separate species. It is found only on Kandavu Island in the Fiji Group.

Superspecies Rhipidura rufifrons

This bird varies geographically more than any other *Rhipidura*, but, as much as I would like to do it, I cannot give a complete revision of the more than thirty representatives, as I have no adequate material from the islands west of New Guinea. Several of the representatives, as *Rhipidura matthiæ* Heinroth and *Rhipidura dahli* Reichenow, have acquired very distinct characters, and it may be safer to regard them as species of the superspecies rufifrons. Others, as *Rh. melanolæma* Sharpe and *Rh. kubaryi* Finsch, I would not give more than subspecific rank.

The following revision restricts itself to those places from which I have sufficient material; that is, the Santa Cruz Group and the Solomon Islands.

Rhipidura rufifrons Latham

Range.—From Australia to the Santa Cruz Group and Solomon Islands in the east, Micronesia (Carolines and Mariannes) in the north and to the Moluccas, Lesser Sunda Islands and Celebes in the West.

In the Santa Cruz Group and the Solomon Islands the following subspecies can be distinguished.

Rhipidura rufifrons melanolæma Sharpe

Rhipidura melanolæma Sharpe, 1879, 'Cat. Birds Brit. Mus.,' IV, p. 313; new name for:

Muscylva pectoralis Pucheran, 1853, 'Voy. Pôle Sud,' Zool., III, p. 75; Vanikoro Island, Santa Cruz Group. [and not: Leucocirca pectoralis Jerdon, 1843, 'Illustr. Ind. Orn.,' pt. 1, text to plate II. = Rhipidura pectoralis Jerdon].

Rhipidura astrolabi Oustalet, 1881, Bull. Soc. Philom., (7) V, No. 2, p. 76; Vanikoro Island, Santa Cruz Group.

Subspecific Characters.—Forehead and supercilium white, not rust-colored;

chin and upper throat black; rump more or less of the color of the back, not rusty; belly, flanks and under tail-coverts whitish.

IMMATURE.—Similar to adult, but distinguishable by the softer plumage, the more soot-colored, instead of pure black throat, the rusty edges of the wing-coverts and the bright rust-colored feather-tips on the rump; some of the young birds have a whitish throat, which is another proof of the relationship to the white-throated representatives.

	Wing	TAIL
♂ad.	70-74(71.8)	79-84(82.5)
♂ juv.	67, 68, 69	77, 80, 83
Q	65-71(67.8)	76-81(79.1)

RANGE.—Vanikoro Island, Santa Cruz Group.

This bird and utupux are rather similar to Rhipidura rufifrons kubaryi from the Caroline Islands.

Rhipidura rufifrons utupuæ, new subspecies

Type.—No. 213917, Amer. Mus. Nat. Hist., & ad.; Utupua Island, Santa Cruz Group; September 28, 1926; R. H. Beck and J. G. Correia.

Subspecific Characters.—Very similar to Rhipidura rufifrons melanolæma, but lower mandible black, not flesh-colored; black of upper breast reaching farther down; white on forehead, supraloral and supraocular region more extended; head and back more rusty, lacking the olive-gray tinge of melanolæma (the difference being about as between bister and sepia, R.XXIX); larger (see measurements); tarsus, 21–22 mm.; "iris brown, bill black, feet brown."

	Wing	$\mathbf{T}_{\mathbf{AIL}}$
$4 \sigma ad.$	76–79(77.8)	87-90(88.5)
4♂ juv.	67-72(70.0)	81-85(83.0)
4 ♀ ad.	71-72(71.5)	84-85(84.5)
2 ♀ juv.	66, 67	77, 79

RANGE.—Utupua Island, Santa Cruz Group.

Rhipidura rufifrons agilis, new subspecies

Type.—No. 217529, Amer. Mus. Nat. Hist.; A ad.; Santa Cruz Island, Santa Cruz Group; February 24, 1927; R. H. Beck and F. P. Drowne.

Subspecific Characters.—Very different from *melanolæma*, and more approaching the representatives of this species on the Solomon Islands; forehead tawny (R.XV); chin, lower cheeks and region below the ear-coverts white (feathers with black bases); upper tail-coverts and base of tail-feathers (except the two outer) pale hazel (R.XIV); under tail-coverts ochraceous.

ADULT.—Forehead and supraocular line tawny; lores, upper cheeks, circumocular space and ear-coverts black; chin, lower cheeks and region below the ear-coverts white, separating the black ear-coverts from the black lower throat and upper breast; feathers on the lower margin of the black breast-shield with white edges; lower breast and belly white, feathers with black bases; flanks gray with pale ochraceous feather tips; under tail-coverts pale ochraceous; thighs dark gray; upperside hair-brown (XLVI), lighter toward the rump; pileum with dark centers; upper tail-

coverts and base of the tail-feathers pale hazel; axillaries grayish with white tips; wing-feathers dark brown; wing-coverts and secondaries with hair-brown edges; tail (except base) blackish; central tail-feathers narrowly, outer broadly tipped with white.

JUVENAL.—Smaller, plumage softer; all colors duller, especially forehead and upper tail-coverts; feathers on lower back and wing-coverts with rusty tips.

	,	Wing	TAIL
9 ♂ ad.		70-72(70.7)	72-78(75.0)
2 ♂ juv.		67, 69	74, 74
8 9 ad.		65-68(66.9)	70-74(72.4)
1 ♀ juv.		66	69

RANGE.—Santa Cruz Island, Santa Cruz Group.

In the Solomon Islands, *Rhipidura rufifrons* was collected by the Whitney South Sea Expedition on twenty-four islands where it divides up into seven subspecies.

Rhipidura rufifrons russata Tristram

Rhipidura russata Tristram, 1879 (October), Ibis, p. 440; Makira Harbour, San Cristobal Island.

Subspecific Characters.—Entire back bright cinnamon-rufous; black collar across the throat narrow.

•	Wing	TAIL	WEIGHT
14 o ad.	66-70(67.9)	70-77(73.6)	9.5-10
4 ♂ juv.	61-64(63.3)	68-73(71.0)	8.5
$3 \circ ad.$	64, 65, 65	73, 74	
3 ♀ juv.	64, 65, 65	70, 70, 72	

RANGE.—San Cristobal Island, British Solomon Islands.

Rhipidura rufifrons kuperi, new subspecies

Type.—No. 217567, Amer. Mus. Nat. Hist.; & ad.; Awa Raha or Santa Anna Island, British Solomon Islands; March 9, 1927; R. H. Beck and F. P. Drowne.

Subspecific Characters.—Similar to russata Tristram, but coloration of the back deeper and more dusky, washed with the hair-brown of the neck; the hair-brown of the hindneck gradually merging into the cinnamon-rufous of lower back and rump, not sharply separated from it as in russata; rusty area on forehead more extended.

	Wing	TAIL
6 ♂ ad.	68-72(69.4)	73-79(76.2)
2 ♂ juv.	64, 65	71, 72
3 ♀ ad.	66, 66, 67	73, 77
2 ♀ iuv.	62, 65	

Most specimens (coll. December, 1929) badly molting.

RANGE.—Santa Anna Island, British Solomon Islands.

I name this interesting new bird in honor of our host, Mr. Henri

Kuper, who gave us every assistance and helped to make our exploration of Santa Anna Island successful.

Rhipidura rufifrons ugiensis, new subspecies

Type.—No. 217586, Amer. Mus. Nat. Hist.; of ad.; Ugi Island, British Solomon Islands, April 13, 1927; R. H. Beck and F. P. Drowne.

Subspecific Characters.—Similar to kuperi, but chin and upper throat black as lower throat; cinnamon-rufous of lower back and rump paler; ear-coverts more brownish; white tips of tail-feathers broader; flanks darker, only the center of the belly being white; larger.

	Wing	TAIL
7 ♂ ad.	70-72(70.7)	73-82(77.0)
1 ♂ juv.	67	
4 ♀ ad.	67-69(68.2)	76, 76, 77

RANGE.—Ugi Island (near San Cristobal), British Solomon Islands. It is interesting to find in the Solomon Islands a subspecies that is black-throated as melanolæma of the Santa Cruz Group.

Rhipidura rufifrons rufofronta Ramsay

Rhissidura rufofronta Ramsay, 1879 (June 5), Nature, XX, p. 125; Guadalcanar Island.

Rhipidura rubrofrontata RAMSAY, 1879 (June 16), Proc. Linn. Soc. N.S.W., XIV, p. 82; Guadalcanar Island.

Subspecific Characters.—Ear-coverts blackish brown, only the very base of the tail-feathers rufous.

	Wing	TAIL
5 ♂ ad.	72-77(74.2)	80-86(83.2)
2 ♂ juv.	70	80, 83
1 0 ad.	69	78

RANGE.—Guadalcanar Island, British Solomon Islands (coll. May and July, 1927).

Rhipidura rufifrons brunnea, new subspecies

Type.—No. 226950, Amer. Mus. Nat. Hist.; & ad.; Malaita Island, British Solomon Islands; H. Hamlin, W. F. Coultas, and W. F. Eyerdam.

Subspecific Characters.—Similar to rufofronta, but darker and more brownish above; ear-coverts more blackish.

	Wing	TAIL	Weight
15 ♂ ad	. 72-77(74.7)	80-86(83.5)	11.5-14(13.2)
5 9 ad	. 69–76(72.4)	77-83(81.2)	12-14.5(13.5)
3 ♀ ju	v. 65, 69, 70	.74, 77, 79	12, 13.5, 15.5

RANGE.—Malaita Island, British Solomon Islands.

Rhipidura rufifrons granti Hartert

Rhipidura rufifrons granti Hartert, 1918, Bull. Brit. Orn. Club, XXXVIII, p. 60; new name for:

Rhipidura harterti Ogilvie-Grant, 1915, Ibis, Supp. 2, p. 149; Rendova Island; not Rhipidura flabellifera harterti Mathews, 1912.

Subspecific Characters.—Similar to *rufofronta*, but rufous-chestnut on tail more extended, covering the whole basal half; ear-coverts black, not brown.

	Wing	TAIL
o ⁷ ad.	72-78(75.9)	80-88(83.2)
♂ juv.	67-73(70.0)	80-81(80.6)
♀ ad.	71-75(73.1)	80-86(82.8)
♀ juv.	66-75(70.8)	76-84(79.8)

RANGE.—Central Solomon Islands (Vella Lavella, Ganonga, Bagga, Narovo, Gizo, Kulambangra, New Georgia, Gatukai, Rendova, and Tetipari).

There are no differences between the birds from the different islands of the central group.

Rhipidura rufifrons commoda Hartert

Rhipidura rufifrons commoda HARTERT, 1918, Bull. Brit. Orn. Club, XXXVIII, p. 60; Bougainville Island.

Subspecific Characters.—Differs from granti by having the ear-coverts brown and by being smaller; differs from rufofronta by having nearly the basal half of the middle tail-feathers rufous as in granti, in having the rufous color on the back extending farther upward, and in being lighter on the upperside.

	Wing	TAIL
♂ ad.	68-74(71.7)	76-83(80.2)
♂ juv.	68-70(68.8)	73-80(77.2)
♀ ad.	67-72(69.0)	73-79(76.6)
♀ juv.	62-67(64.7)	70-77(73.7)

RANGE.—Northern Solomon Islands (Buka, Bougainville, Shortland, Fauro, Momalufu, Choiseul, Molakobi, Arnavon, and Ysabel).

Rhipidura malaitæ, new species

Type.—No. 226985, Amer. Mus. Nat. Hist.; \circlearrowleft ad.; Malaita Island, British Solomon Islands; April 4, 1930; W. F. Coultas, H. Hamlin and W. J. Eyerdam.

ADULT (male and female).—Above and below more or less uniform cinnamonrusty; forehead, superciliary and sides of the head rusty-tawny; lores paler, feathers with blackish shafts; 'crown and hindneck dusky, about Prout's Brown (R.XV); scapulars, back, rump, upper tail-coverts and tail russet-hazel; wing feathers and coverts blackish; basal half of outer webs of primaries like the back; outer web of wing-coverts of the same color; secondaries on inner and outer web broadly edged with russet, innermost secondaries only with black line along the shaft; underside paler, throat light ochraceous-buff; breast, abdomen, flanks and under tail-coverts pale ochraceous-tawny; under wing-coverts and axillaries of the same color, outer web of the latter grayish.

JUVENAL.—Similar to adult but plumage softer; wing and tail shorter. Iris red-brown, upper mandible bluish black, lower mandible whitish, feet black. Culmen (from forehead), 13–14 mm., (exposed), 9–10 mm.; tarsus, 14–16 mm.

	Wing	TAIL	WEIGHT
σ ad.	74-78(76.0)	69-76(71.9)	11.5-14.5(12.8)
♂ juv.	70, 74	65-71(69.0)	11.5-14.5(13.1)
♀ ad.	66-72(69.4)	66-72(68.7)	10.5-13 (11.6)
♀ juv.	66-69(67.2)	66, 67, 68	10-12 (11.0)

Range.—Mountains of Malaita (British Solomon Islands) between 2000 and 4000 feet.

This species has no close relatives and differs from all the other members of the genus not only by its coloration, but also by the proportions, the tail averaging shorter than wing.