

Termites of the Genus *Reticulitermes* of Japan and Taiwan

By

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There are two opinions on the taxonomy of the genus *Reticulitermes* of Japan and Taiwan, namely, that there are two species from Japan and Taiwan proposed first by OSHIMA (1908) and supported by LIGHT (1931), KOIDZUMI (1921) and SNYDER (1949), or that there is only one species from there treated by YANO (1910), HOLMGREN (1912, 15), HOZAWA (1915) and AHMAD (1958).

So far as the author's present investigation goes, four species of the genus are confirmed from the named regions as noted in this paper.

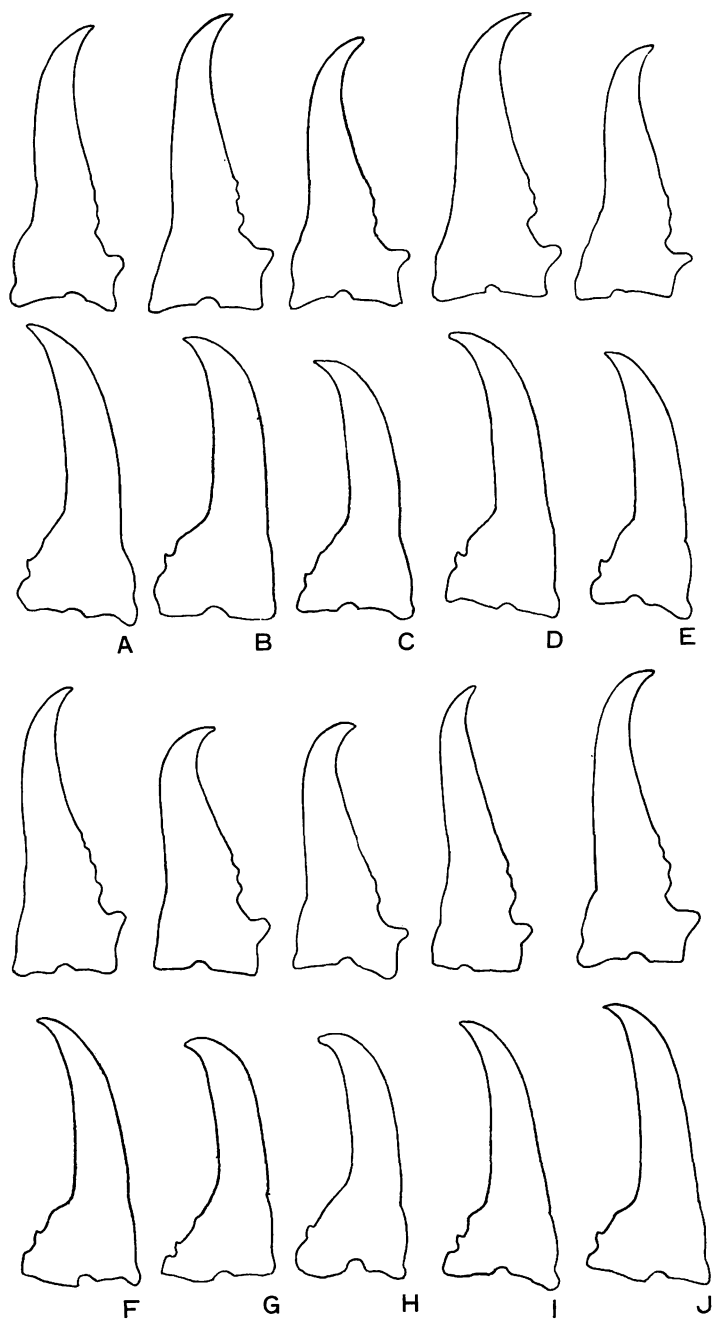
Taxonomic characters treated in this paper are enumerated here.

Taxonomic characters : Soldier (Fig. 1)

1. Length of head with mandible (A~F). Position of the mandibles are not stable in alcoholic specimens, but most of them take a position as illustrated in Fig. 1.
2. Length of head to the tip of labrum (B~F). Many specimens have a labrum oblique rightwards to the mesial line of head in position.
3. Length of head to the anterior of clypeus (C~F). Anteclypeus is membraneous and very often deeply retracted under postclypeus.
4. Length of head to the anterior margin of frons (D~F), measured on the mesial line.
This is the most reliable length of head.
5. Distance of fontanelle (E~F).
6. Maximum width of head (G~H).
7. Length of right mandible from the basal outer angle to the tip.
8. Length of left mandible.
9. Number of antennal segments.
10. Length of gula (M~N).
11. Maximum width of gula (I~J).
12. Minimum width of gula (K~L).
13. Length of metafemur.
14. Length of metatibia.
15. Length of labrum (O~P), from the hyaline tip to the posterior margin of brownish sclerotic area measured on the mesial line.
Present method of measurement is said practical in view of the fact that the real basal margin of labrum is very often covered by anteclypeus and invisible from dorsal side in many specimens.
16. Maximum width of labrum (Q~R).

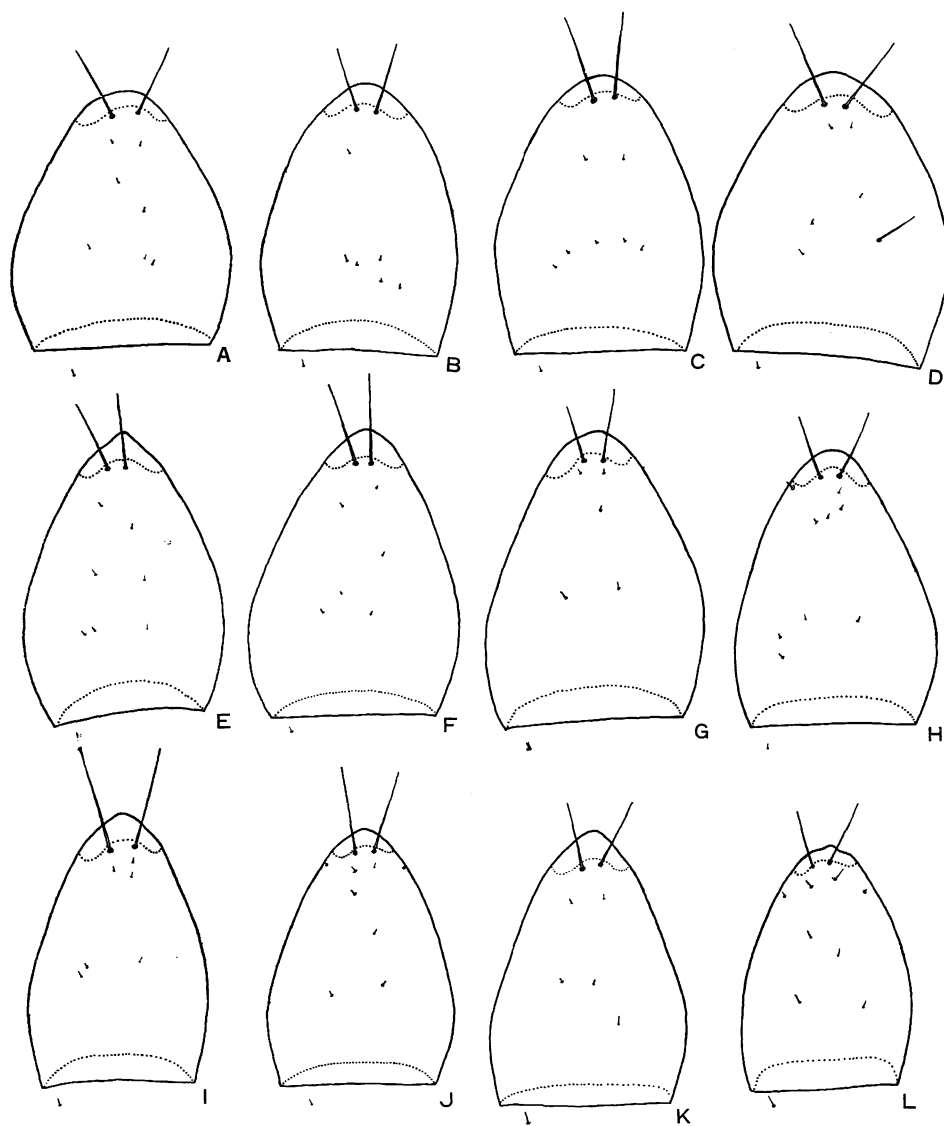
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- A ~ B : *speratus speratus* (A : Hakodate ; B : Tokyo)
 C : *speratus leptolabralis* (Kochi)
 D : *speratus kyushuensis* (Kagoshima)
 E : *speratus okinawanus* (Gogasan)
 F : *speratus yaeyamanus* (Ishigaki)
 G ~ H : *miyatakei* (Santaro-toge)
 I : *flaviceps amamianus* (Yuwandake)
 J : *flaviceps flaviceps* (Yangmingshan)

Fig. 3 Mandible



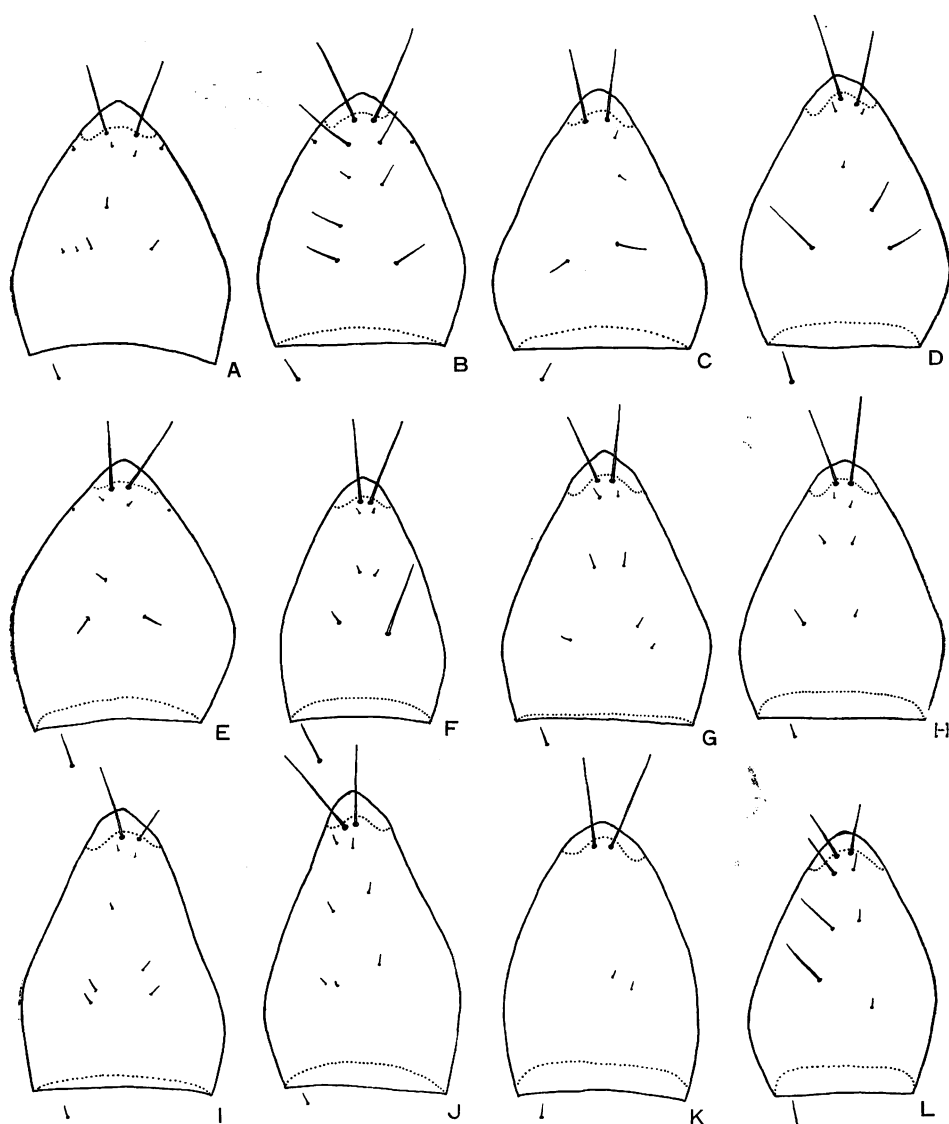
A ~ H : *speratus speratus* (A : Hakodate ; B : Ohno ; C : Ishikawa ; D : Mt. Fuji ;

E : Saitama ; F : Tokyo ; G : Hamamatsu ; H : Is. Miyake)

I ~ L : *speratus leptolabralis* (I : Kyoto ; J : Okayama ; K : Matsue ; L : Kochi)

Fig. 4 Soldier labrum.

31. Labral index (15/16).
32. Pronotal index (22/21).
33. Head-pronotum width index (6/21).
34. Convexity of frons (Fig. 2).
35. Shape of head (Fig. 2).
36. Curvature of mandible (Fig. 3).
37. Shape of labrum, sketched from preparation (Figs. 4~7).



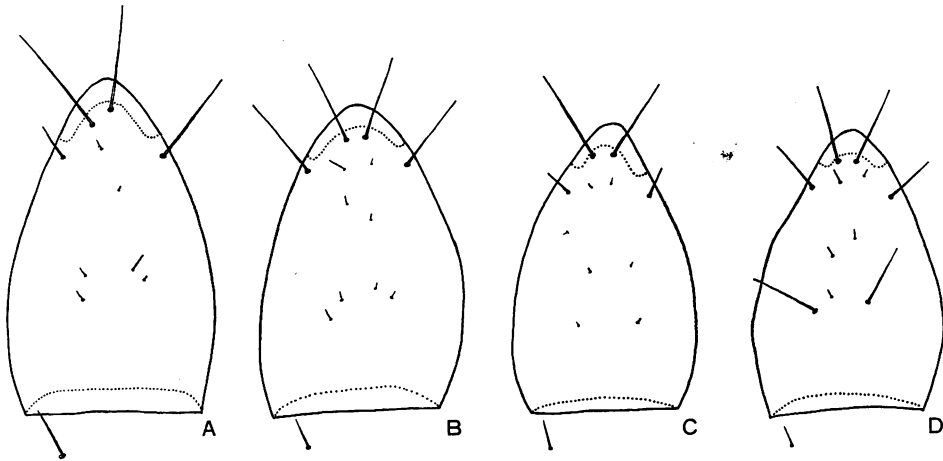
A ~ H : *speratus kyushuensis* (A ~ B : Mitaziri ; C : Matsuyama ; D : Fukuoka ;
E : Miyazaki ; F : Miyazaki-Wanizuka ; G : Kagoshima ; H : Cape Sata)
I ~ J : *speratus okinawanus* (I : Yona ; J : Gogasan)
K ~ L : *speratus yaeyamanus* (K : Ishigaki ; L : Iriomote)

Fig. 5 Soldier labrum.

- .38. Shape of gula (Fig. 8).
- .39. Shape of pronotum (Fig. 9).

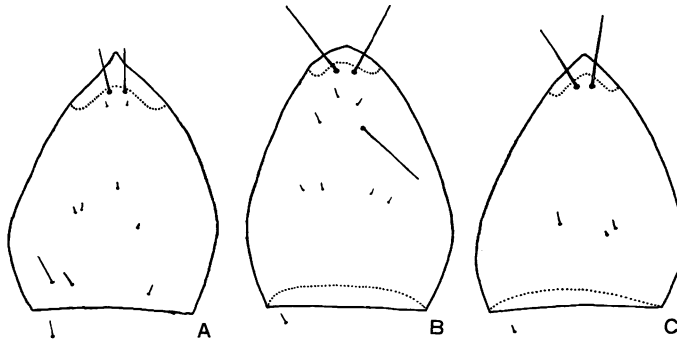
Taxonomic characters : Winged form (Fig. 1).

- 1. Total body-length with wings.
- 2. Body-length without wings.
- .3. Distance of fontanelle (A ~ B).



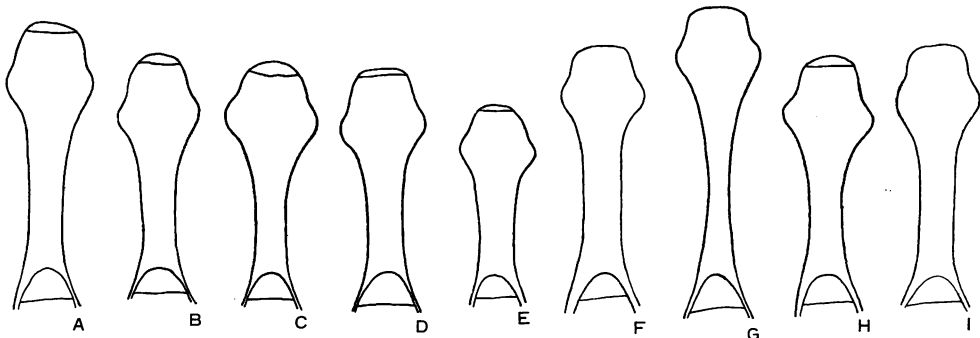
A ~ B : *flaviceps amamianus* (A : Yuwandake ; B : Yoron)
C ~ D : *flaviceps flaviceps* (Yangmingshan)

Fig. 6 Soldier labrum.



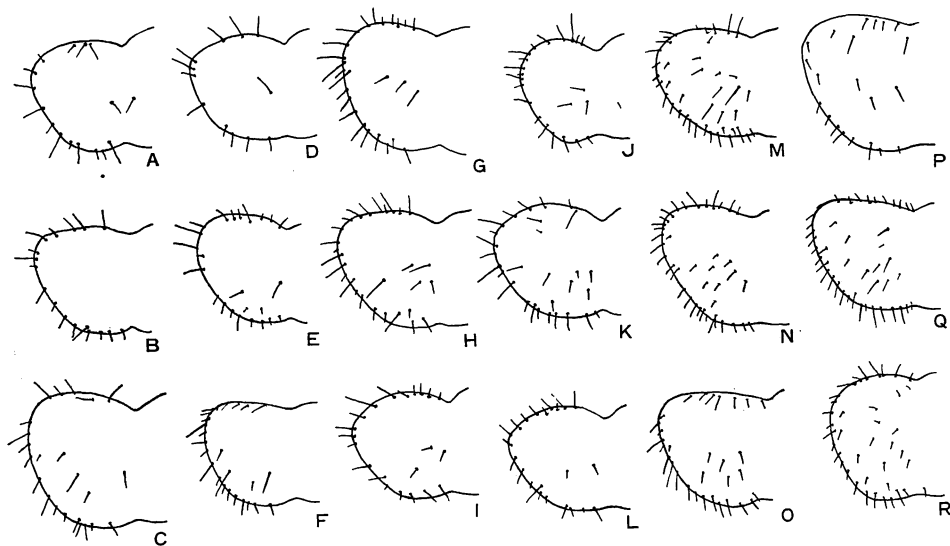
A : *chinensis leptomandibularis* (Wulai)
B ~ C : *miyatakei* (Santaro-toge)

Fig. 7 Soldier labrum.



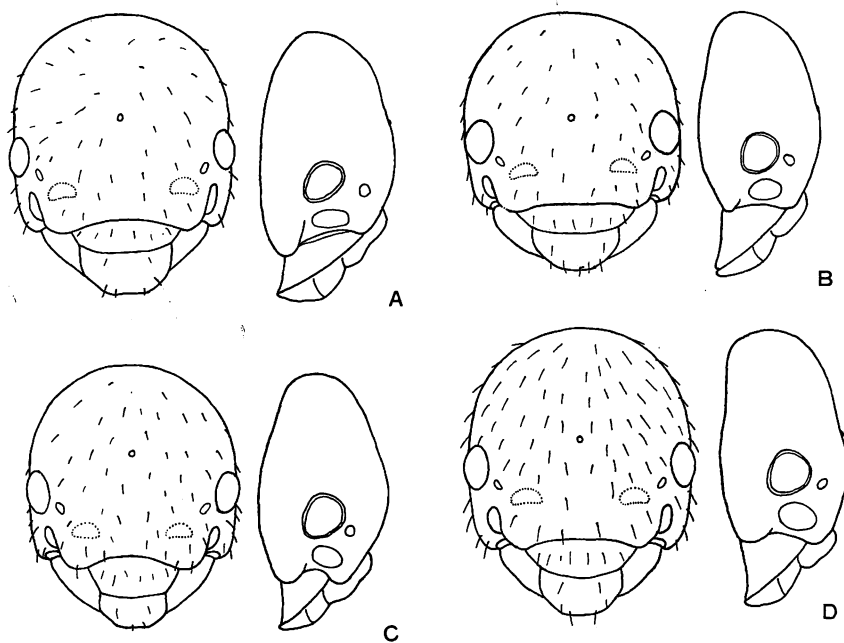
A : *speratus speratus* (Tokyo) B : *speratus leptolabralis* (Kochi)
C : E : *speratus kyushuensis* (C : Fukuoka ; E : Miyazaki-Wanizuka)
D : *speratus okinawanus* (Gogasan) F : *speratus yaeyamanus* (Ishigaki)
G : *miyatakei* (Santaro-toge) H : *flaviceps amamianus* (Yuwandake)
I : *flaviceps flaviceps* (Yangmingshan)

Fig. 8 Soldier gula.



A ~ C : *speratus speratus* (A : Hakodate ; B : Chiba ; C : Is. Miyake)
D ~ F : *speratus leptolabralis* (D : Kyoto ; E : Matsue ; F : Kochi)
G ~ L : *speratus kyushuensis* (G : Shimane ; H : Mitaziri ; I : Fukuoka ; J : Miyazaki-
Wanizuka ; K : Kagoshima ; L : Cape Sata)
M : *speratus okinawanus* (Gogasan) N : *speratus yaeyamanus* (Ishigaki)
O : *miyatakei* (Santaro-toge) P : *chinensis leptomandibularis* (Wulai)
Q : *flaviceps amamianus* (Yuwandake) R : *flaviceps flaviceps* (Yangmingshan)

Fig. 9 Soldier pronotum, left half.



A : *speratus speratus* (Hakodate), B : *speratus kyushuensis* (Fukuoka)
C : *speratus okinawanus* (Naha), D : *flaviceps flaviceps* (Yangmingshan)

Fig. 10. Winged-form head.

4. Length of head to the anterior margin of frons (A~C).
5. Length of head to the anterior margin of labrum (A~D).
6. Maximum width of head without eye (E~F).
7. Length of clypeus (G~H).
8. Maximum width of clypeus (J~K).
9. Length of labrum (H~I).
10. Length of gula.
11. Width of gula.
12. Maximum diameter of compound eye with ocular sclerite (L).
13. Maximum diameter of compound eye without ocular sclerite.
14. Minimum eye-ocellus distance (M).
15. Number of antennal segments.
16. Width of pronotum.
17. Maximum length of pronotum.
18. Length of protibia.
19. Length of metatibia.
20. Length of fore wing with scale.
21. Width of fore-wing.
22. Number of *Cu*-branches of fore-wing, without sub-branch.
23. Number of specimens examined.
24. Head index I (4/6).
25. Head index II (5/6).
26. Pronotum index (17/16).
27. Fore-wing index (21/20).
28. Compound-eye sclerite index (12~13/12).
29. Coloration of head.
30. Setal density on head (Fig. 10).
31. Shape of pronotum.
32. Coloration of pronotum (Tab. 4).

After the examination of these characters, it becomes clear that the following characteristics are the most important for the separation of species and subspecies.

Soldier : General shape of head, convexity of frons, shape of labrum, presence and the length of setae on labrum and clypeus, curvature of mandible, shape of gula.

Winged form : General shape of head, coloration of gula and circumgular regions.

Results of the measurement are enumerated in Table 1~3.

Key to species and subspecies

Soldier

- 1 : Labrum subspiniiform at tip. Frontal area not raised. Head parallelsided.
.....*chinensis* SNYDER
- 1' : Labrum lanceolate or rounded at tip. Frontal area more or less raised. 2
- 2 : Head with the lateral sides straight and tapering posteriorly. Gula slender, gular index
I less than 0.3. Mandibles curved stringly at tip. ...*miyatakei* sp. nov.
- 2' : Head parallel-sided or tapering anteriorly from the broadest portion a little behind the

Table 1. Measurements of taxonomic characters

Soldier (Unit mm)

Specific name	<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus speratus</i>		
Locality	Hakodate			Aomori, Hiraga			Tochigi, Ohirayama			Kyoto, Minami, Nishi-9			Osaka, Sakai		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	2.66	2.62	2.81	2.54	2.43	2.62	2.48	2.44	2.5	2.53	2.35	2.62	2.24	2.38	2.63
2	2.26	2.13	2.38	2.17	2.13	2.19	2.17	2.13	2.20	2.14	2.05	2.31	2.08	2.01	2.28
3				1.76	1.71	1.80	1.76	1.71	1.80	1.88	1.65	2.31	1.7	1.65	1.83
4	1.71	1.62	1.83	1.57	1.49	1.65	1.61	1.54	1.65	1.64	1.51	1.71	1.61	1.56	1.7
5	1.19	1.10	1.22	1.06	0.98	1.16	1.09	1.03	1.16	1.15	1.02	1.22	1.13	1.07	1.2
6	1.17	1.11	1.23	1.13	1.10	1.18	1.15	1.12	1.16	1.07	1.0	1.12	1.08	1.04	1.16
7	1.03	0.97	1.04	1.04	1.03	1.05	1.02	0.98	1.04	1.02	1.975	1.04	0.98	0.975	0.99
8	1.02	0.97	1.07	1.02	0.98	1.04	0.99	0.98	1.04	0.985	0.96	1.04	0.99	0.975	1.04
9		15	17	16	16	16		15	16		15	16		55	16
10	1.23	1.10	1.28	1.16	1.1	1.22	1.11	1.04	1.16	0.99	0.975	1.17	1.135	1.1	1.16
11	0.481	0.456	0.489	0.446	0.426	0.456	0.464	0.426	0.488	0.423	0.395	0.44	0.435	0.427	0.50
12	0.176	0.159	0.183	0.173	0.159	0.183	0.174	0.165	0.183	0.168	0.152	0.182	0.167	0.152	0.177
13	0.885	0.823	0.914	0.86	0.85	0.87	0.79	0.73	0.85	0.8	0.765	0.85	0.82	0.79	0.855
14	0.885	0.852	0.914	0.87	0.85	0.92	0.84	0.81	0.85	0.815	0.765	0.85	0.835	0.81	0.915
15	0.4	0.384	0.409	0.445	0.407	0.456	0.408	—		0.372	0.36	0.395	0.38	0.36	0.395
16	0.355	0.334	0.379	0.353	0.336	0.384	0.37	0.354	0.384	0.32	0.312	0.335	0.332	0.313	0.36
17	0.29	0.264	0.311	0.28	0.264	0.30	0.28	0.264	0.311	0.285	0.275	0.287	0.28	0.264	0.288
18	—			—			—			—			—		
19	—			—			3 m,	2 —		—			—		
20	—			—			—			—			—		
21	0.82	0.815	0.84	0.83	0.78	0.86	0.81	0.79	0.82	0.74	0.695	0.765	0.765	0.72	0.84
22	0.495	0.48	0.51	0.49	0.48	0.50	0.446	0.431	0.456	0.46	0.431	0.505	0.475	0.455	0.529
23	12.8	10	17	12.8	11	14	10.4	7	13	13	11	16	12.6	12	13
24	3.4	1	7	2.75	2	4	0.4	0	1	0.4	0	2	1	0	2
25	0.671	0.628	0.714	0.724	0.70	0.74	0.715	0.70	0.75	0.655	0.65	0.665	0.67	0.65	0.685
26	0.692	0.655	0.714	0.679	0.65	0.70	0.68	0.65	0.69	0.655	0.51	0.72	0.7	0.69	0.715
27	0.356	0.337	0.375	0.388	0.37	0.43	0.378	0.363	0.397	0.4	0.356	0.425	0.378	0.312	0.415
28	2.51	2.25	2.66	2.6	2.53	2.78	2.36	2.13	2.71	2.62	2.43	2.85	2.56	2.36	2.7
29	6.9	6.41	7.86	6.7	6.32	7.41	6.34	5.67	7.59	6.55	5.5	7.65	6.8	6.2	7.6
30	1.97	1.70	2.06	1.77	1.73	1.82	1.9	1.80	1.97	2.15	1.92	2.95	1.93	1.87	1.96
31	1.06	1.0	1.11	1.13	1.10	1.16	1.10	1.06	1.16	1.17	1.15	1.18	1.15	1.1	1.17
32	0.602	0.589	0.612	0.58	0.57	0.63	0.55	0.53	0.58	0.62	0.58	0.655	0.62	0.614	0.632
33	1.52			1.37			1.42			1.44			1.41		

Specific name	<i>speratus leptolabralis</i>			<i>speratus leptolabralis</i>			<i>speratus leptolabralis</i>			<i>speratus leptolabralis</i>			<i>speratus leptolabralis</i>		
Locality	Okayama, Ashimori			Tokushima, Naruto			Kagawa, Naoshima			Kochi, Jinzenji			Shimane Matsue		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	2.5	2.43	2.6	2.43	2.4	2.47	2.64	2.56	2.69	2.56	2.38	2.74	2.55	2.44	2.62
2	2.08	1.86	2.25	2.02	1.96	2.04	2.3	2.2	2.38	2.22	2.04	2.38	2.28	2.12	2.32
3	1.715	1.65	1.84	1.59	1.52	1.64	1.88	1.8	1.95	1.79	1.59	1.95	1.74	1.64	1.83
4	1.62	1.53	1.66	1.47	1.4	1.5	1.72	1.7	1.77	1.63	1.47	1.77	1.625	1.5	1.72
5	1.13	1.12	1.16	1.05	0.95	1.09	1.26	1.19	1.28	1.13	0.95	1.31	1.15	1.01	1.28
6	1.11	1.06	1.12	1.07	1.05	1.085	1.195	1.16	1.22	1.09	1.04	1.13	1.08	1.04	1.12
7	1.0	0.97	1.4	0.995	0.975	1.1	1.04	0.975	1.06	1.06	0.98	1.16	1.03	1.01	1.04
8	0.995	1.1	1.2	0.95	0.915	0.975	1.02	0.98	1.05	1.01	0.92	1.16	1.02	0.975	1.04
9		15	16		15	16		16	17		15	17		14	17
10	1.14	1.1	1.3	1.01	0.975	1.05	1.22	1.145	1.28	1.32	1.16	1.53	1.16	1.095	1.21
11	0.444	0.428	0.47	0.44	0.42	0.45	0.475	0.455	0.49	0.44	0.43	0.46	0.435	0.425	0.455
12	0.172	0.158	0.184	0.18	0.177	0.183	0.178	0.177	0.183	0.182	0.177	0.183	0.176	0.17	0.183
13	0.785	0.73	0.805	0.77	0.73	0.79	0.88	0.825	0.915	0.79	0.79	0.79	0.84	0.79	0.855
14	0.835	0.79	0.855	0.88	0.79	0.855	0.94	0.915	0.975	0.78	0.76	0.79	0.88	0.85	0.925
15	0.381	0.36	0.408	0.43	0.403	0.433	0.428	0.413	0.48	0.40	0.38	0.41	0.419	0.408	0.43
16	0.32	0.305	0.336	0.325	0.32	0.335	0.344	0.319	0.362	0.308	0.30	0.325	0.338	0.337	0.345
17	0.278	0.264	0.288	0.287	0.283	0.288	0.293	0.288	0.312	0.272	0.264	0.30	0.29	0.279	0.308
18	—			—			—			—			2 m, 3 —		
19	—			—			—			1 s, 4 —			5 l		
20	—			—			—			—			1 l, 3 s, 1 —		
21	0.79	0.45	0.84	0.735	0.72	0.755	0.865	0.815	0.92	0.708	0.58	0.79	0.785	0.755	0.795
22	0.47	0.432	0.51	0.455	0.455	0.455	0.525	0.49	0.55	0.48	0.456	0.505	0.485	0.455	0.51
23	12.8	11	14	13	9	15	13.2	11	17	12.4	9	15	15	13	18
24	3.8	2	6	2	0	4	4.6	2	7	3.8	1	7	4.6	4	6
25	0.69	0.678	0.715	0.725	0.71	0.75	0.69	0.67	0.7	0.67	0.64	0.71	0.668	0.631	0.694
26	0.705	0.695	0.715	0.695	0.67	0.71	0.73	0.713	0.753	0.697	0.65	0.74	0.706	0.671	0.74
27	0.39	0.35	0.415	0.41	0.392	0.428	0.378	0.363	0.4	0.412	0.39	0.43	0.405	0.386	0.416
28	2.57	2.55	2.72	2.3	2.26	2.46	2.57	2.38	2.8	2.99	2.71	3.30	2.65	2.54	2.78
29	6.65	6.2	7.3	5.65	5.33	5.92	6.85	6.6	7.24	7.5	6.33	8.33	6.54	6.2	6.85
30	1.91	1.78	1.99	1.74	1.64	1.92	1.84	1.74	1.93	2.07	1.85	2.23	1.84	1.61	2.01
31	1.23	1.21	1.27	1.32	1.27	1.36	1.25	1.11	1.35	1.30	1.22	1.36	1.22	1.2	1.26
32	0.59	0.54	0.605	0.62	0.601	0.632	0.61	0.592	0.64	0.65	0.6	0.83	1.618	0.59	0.64
33	1.41			1.46			1.38			1.42			1.36		

Table 1. (Continued)

Specific name	<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>		
Locality	Okayama, Washuzan			Shimane, Hoshigami			Yamaguchi, Mitaziri			Ehime, Matsuyama			Fukuoka, Kashii		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	2.62	2.59	2.65	2.73	2.7	2.74	2.48	2.38	2.56	2.61	2.56	2.69	2.42	2.32	2.56
2	2.15	2.07	2.3	2.33	2.25	2.45	2.06	2.02	2.2	2.19	2.07	2.24	2.03	1.95	2.08
3	1.795	1.71	1.83	1.93	1.89	2.02	1.705	1.65	1.77	1.83	1.77	1.89	1.63	1.59	1.71
4	1.675	1.59	1.72	1.8	1.77	1.87	1.59	1.54	1.65	1.74	1.65	1.79	1.46	1.37	1.59
5	1.2	1.1	1.24	1.275	1.22	1.34	1.09	1.01	1.16	1.22	1.19	1.28	0.976	0.915	1.13
6	1.105	1.1	1.135	1.2	1.16	1.22	1.13	1.11	1.16	1.15	1.10	1.19	1.10	1.06	1.13
7	1.04	0.99	1.08	1.045	1.04	1.07	1.03	1.01	1.05	1.04	1.03	1.05	1.04	1.04	1.04
8	1.05	1.02	1.075	1.05	1.04	1.09	1.01	0.99	1.04	1.03	1.02	1.05	1.0	0.99	1.03
9		14	16		15	16		16	17		15	17		15	16
10	1.24	1.22	1.28	1.28	1.28	1.28	1.09	1.04	1.13	1.19	1.10	1.31	1.11	1.04	1.22
11	0.455	0.427	0.47	0.508	0.5	0.512	0.427	0.427	0.427	0.439	0.434	0.445	0.449	0.426	0.481
12	0.169	0.165	0.175	0.178	0.175	0.184	0.173	0.152	0.176	0.175	0.159	0.183	0.167	0.159	0.177
13	0.86	0.85	0.925	0.86	0.79	0.915	0.80	0.765	0.855	0.84	0.79	0.88	0.82	0.79	0.85
14	0.88	0.85	0.925	0.92	0.915	0.94	0.85	0.825	0.855	0.88	0.855	0.915	0.81	0.79	0.89
15	0.395	0.385	0.407	0.42	0.408	0.437	0.383	0.36	0.408	0.39	0.385	0.395	0.384	0.336	0.408
16	0.35	0.34	0.365	0.367	0.358	0.385	0.335	0.324	0.36	0.351	0.336	0.366	0.35	0.336	0.36
17	0.3	0.288	0.311	0.304	0.288	0.311	0.294	0.288	0.312	0.351	0.311	0.325	0.274	0.264	0.288
18	—			—			1 m, 4 —			—			2 m, 3 —		
19	1 l, 2 s, 1 m			1 l, 1 m, 1 —			4 l, 1 —			4 l, 1 s			1 l, 4 s		
20	—			—			3 s, 2 —			2 l, 2 s, 1 m			5 l		
21	0.83	0.815	0.84	0.88	0.865	0.885	0.825	0.79	0.875	0.825	0.815	0.84	0.80	0.77	0.84
22	0.505	0.505	0.505	0.535	0.529	0.551	0.515	0.48	0.55	0.523	0.503	0.551	0.467	0.456	0.493
23	12.75	12	14	13	10	18	15	13	17	13.2	10	15	13	10	14
24	2.75	1	4	3.3	2	6	5.6	4	7	5.4	4	9	5.2	4	7
25	0.66	0.64	0.69	0.664	0.61	0.68	0.71	0.675	0.725	0.65	0.615	0.705	0.754	0.71	0.78
26	0.72	0.69	0.73	0.707	0.691	0.72	0.685	0.655	0.705	0.7	0.695	0.73	0.671	0.65	0.71
27	0.37	0.35	0.4	0.353	0.345	0.361	0.405	0.357	0.43	0.4	0.366	0.423	0.372	0.33	0.415
28	2.73	2.6	3.0	2.53	2.5	2.56	2.56	2.43	2.65	2.72	2.54	2.95	2.48	2.40	2.56
29	7.35	7.15	7.5	7.19	7.0	7.25	6.3	6.05	6.8	6.8	6.05	7.25	6.65	6.4	7.7
30	1.87	1.7	2.0	1.96	1.87	2.04	1.88	1.8	1.93	1.97	1.93	1.99	1.79	1.7	1.85
31	1.122	1.08	1.18	1.143	1.14	1.15	1.14	1.02	1.24	1.11	1.06	1.16	1.10	1.0	1.14
32	0.605	0.6	0.615	0.609	0.596	0.626	0.625	0.58	0.665	0.64	0.6	0.675	0.581	0.56	0.594
33	1.37			1.36			1.37			1.39			1.38		

Specific name	<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>		
Locality	Fukuoka, Hakozaki			Kumamoto, Sumoto			Miyazaki, Hitotsuba			Miyazaki, Wanizuka			Kagoshima, Sata		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	2.6	2.51	2.68	2.51	2.44	2.62	2.48	2.33	2.56	2.24	2.17	2.38	2.39	2.32	2.46
2	2.24	2.19	2.28	2.06	2.01	2.13	2.0	1.89	2.06	1.89	1.83	2.04	2.07	2.04	2.08
3										1.53	1.46	1.65			
4	1.63	1.5	1.68	1.53	1.43	1.62	1.57	1.43	1.65	1.39	1.32	1.52	1.50	1.43	1.55
5	1.13	1.04	1.22	1.06	0.98	1.10	1.06	0.98	1.16	0.97	0.915	1.04	1.04	1.01	1.10
6	1.14	1.10	1.16	1.12	1.10	1.17	1.07	1.05	1.09	0.97	0.95	0.99	1.04	1.01	1.05
7	1.08	1.13	1.10	1.01	0.98	1.04	1.01	0.98	1.04	0.91	0.87	0.98	1.00	0.98	1.04
8	1.14	1.14	1.14	0.99	0.98	1.04	0.97	0.92	1.01	0.92	0.884	0.975	1.96	0.935	1.04
9		14	16	16	16	16		14	16		14	14		15	16
10	1.13	1.04	1.22	1.21	1.10	1.25	1.07	1.03	1.16	0.951	0.853	1.07	1.04	1.04	1.04
11	0.481	0.456	0.487	0.48	0.458	0.489	0.426	0.408	0.439	0.395	0.371	0.426	0.428	0.421	0.439
12	0.162	0.153	0.183	0.179	0.164	0.183	0.173	0.153	0.183	0.179	0.177	0.182	0.159	0.14	0.171
13	0.83	0.79	0.92	0.81	0.73	0.93	0.76	0.73	0.79	0.72	0.67	0.79	0.74	0.7	0.79
14	0.88	0.79	0.92	0.86	0.76	0.91	0.81	0.76	0.85	0.744	0.7	0.805	0.78	0.73	0.85
15	0.408	0.384	0.432	0.415	0.408	0.432	0.364	0.3	0.396	0.354	0.335	0.371	0.4	0.384	0.408
16	0.358	0.329	0.385	0.367	0.347	0.384	0.338	0.312	0.36	0.286	0.269	0.295	0.326	0.311	0.347
17	0.273	0.24	0.288	0.303	0.288	0.312	0.27	0.264	0.288	0.264	0.24	0.285	0.262	0.24	0.288
18	4 m, 1 —			5 m			3 m, 2 —			—			—		
19	5 l			5 l			4 l, 1 s			3 l, 2 s			3 l, 2 s		
20	5 l			5 l			4 l, 1 s			3 l, 2 s			3 l, 2 s		
21	0.85	0.77	0.89	0.83	0.77	0.89	0.755	0.695	0.815	0.668	0.649	0.671	0.76	0.72	0.78
22	0.482	0.48	0.5	0.5	0.48	0.53	0.475	0.455	0.50	0.42	0.384	0.456	0.423	0.408	0.456
23	12	11	13	12.4	11	14	12.8	11	14	11.8	9	13	15	12	19
24	5.6	4	7	6.6	2	10	3.6	2	6	3.2	2	4	3	1	4
25	0.71	0.69	0.74	0.73	0.68	0.8	0.685	0.63	0.76	0.697	0.63	0.73	0.694	0.675	0.7
26	0.71	0.69	0.73	0.69	0.66	0.73	0.68	0.593	0.712	0.697	0.68	0.71	0.695	0.673	0.708
27	0.357	0.313	0.387	0.372	0.338	0.4	0.406	0.357	0.432	0.453	0.415	0.475	0.371	0.33	0.406
28	2.36	2.25	2.37	2.58	2.25	2.73	2.53	2.36	2.84	2.42	2.29	2.58	2.43	2.36	2.46
29	6.60	5.88	7.99	6.51	6.32	6.81	6.2	5.67	7.21	5.21	4.83	6.0	6.52	6.08	7.4
30	1.81	1.7	1.9	1.85	1.73	1.93	1.93	1.68	2.08	1.87	1.77	1.99	1.91	1.82	2.06
31	1.14	1.0	1.16	1.14	1.06	1.21	1.12	1.07	1.15	1.23	1.16	1.34	1.22	1.17	1.29
32	0.57	0.54	0.625	0.62	0.6	0.66	0.63	0.56	0.73	0.631	0.59	0.68	0.553	0.523	0.593
33	1.34			1.32			1.42			1.45			1.37		

Table 1. (Continued)

Specific name	<i>speratus okinawanus</i>			<i>speratus yaeyamanus</i>			<i>flaviceps flaviceps</i>			<i>flaviceps amamianus</i>			<i>miyatakei</i>		
Locality	Okinawa, Yona			Iriomote, Shirahama			Taipei, Yangmingshan			Amami-Oshima, Yuwan			Amami-Oshima, Santaro		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	2.34	2.25	2.43	2.56	2.38	2.78	2.69	2.5	2.92	2.57	2.53	2.62	2.44	2.26	2.56
2	2.05	1.95	2.13	2.16	1.98	2.25	2.32	2.14	2.44	2.24	2.14	2.32	2.08	1.95	2.19
3	1.635	1.53	1.71	1.85	1.77	1.92	1.89	1.71	2.02	1.76	1.71	1.80	1.75	1.64	1.83
4	1.55	1.46	1.56	1.66	2.15	1.83	1.79	1.53	1.89	1.60	1.56	1.64	1.64	1.52	1.71
5	1.095	1.06	1.16	1.24	1.01	1.4	1.24	1.04	1.41	1.13	1.10	1.18	1.23	1.1	1.32
6	1.0	0.97	1.02	1.03	0.98	1.10	1.11	1.10	1.16	1.07	1.04	1.11	0.99	0.97	1.03
7	0.97	0.96	0.98	1.01	0.98	1.04	1.05	1.04	1.10	1.05	1.02	1.07	0.89	0.85	0.92
8	0.94	0.915	0.975	0.99	0.98	1.01	1.06	1.04	1.10	1.02	1.02	1.02	0.90	0.85	0.92
9		15	16		15	17		16	16		15	16		14	15
10	1.081	1.01	1.16	1.19	1.04	1.22	1.22	1.04	1.34	1.12	1.10	1.16	1.18	1.1	1.28
11	0.435	0.42	0.456	0.435	0.426	0.456	0.466	0.426	0.488	0.43	0.43	0.44	0.398	0.371	0.426
12	0.186	0.177	0.195	0.169	1.51	1.81	0.188	0.177	0.213	0.16	0.15	0.17	0.116	0.11	0.122
13	0.74	0.7	0.79	0.79	0.76	0.8	0.83	0.794	0.855	0.85	0.85	0.85	0.71	0.67	0.73
14	0.765	0.745	0.79	0.81	0.79	0.86	0.855	0.794	0.886	0.85	0.85	0.85	0.76	0.73	0.79
15	0.435	0.417	0.45	0.39	0.384	0.406	0.446	0.409	0.456	0.47	0.46	0.50	0.365	0.336	0.409
16	0.328	0.316	0.358	0.312	0.288	0.336	0.331	0.312	0.348	0.37	0.36	0.38	0.328	0.312	0.343
17	0.28	0.265	0.293	0.254	0.24	0.264	0.259	0.24	0.264	0.29	0.28	0.31	0.273	0.264	0.288
18	—			3 s, 1 m, 1 —			3 l, 1 m, 1 —			5 l			—		
19	3 m, 2 —			2 l, 2 m, 1 —			1 l, 2 m, 2 —			—			2 s, 3 —		
20	3 m, 2 —			1 s, 4 —			1 s, 1 m, 3 —			1 l, 4 s			1 l, 1 s, 3 m		
21	0.72	0.695	0.745	0.777	0.72	0.816	0.828	0.817	0.913	0.81	0.77	0.84	0.71	0.67	0.74
22	0.44	0.408	0.455	0.468	0.408	0.503	0.475	0.431	0.504	0.50	0.49	0.53	0.47	0.43	0.5
23	19.2	16	25	16	13	19	19	16	22	22.4	22	23	18.6	14	22
24	4.8	2	7	10.8	4	16	14.6	10	19	14.6	12	16	10.6	8	14
25	0.661	0.638	0.678	0.623	0.592	0.694	0.644	0.597	0.71	0.67	0.64	0.70	0.61	0.57	0.63
26	0.728	0.718	0.737	0.75	0.674	0.77	0.72	0.68	0.76	0.71	0.69	0.75	0.75	0.72	0.77
27	0.426	0.415	0.435	0.386	0.347	0.415	0.403	0.363	0.438	0.38	0.36	0.40	0.291	0.269	0.311
28	2.48	2.4	2.64	2.71	2.43	2.86	2.61	2.37	3.01	2.59	2.50	2.71	2.97	2.94	3.0
29	5.84	5.68	6.12	7.02	6.33	7.6	6.5	5.67	7.32	6.81	6.42	7.60	10.2	9.5	11.1
30	1.98	1.9	2.08	2.03	1.89	2.14	2.02	1.80	2.14	1.87	1.85	1.92	2.16	2.07	2.33
31	1.32	1.17	1.41	1.25	1.14	1.42	1.35	1.21	1.46	1.28	1.22	1.31	1.11	1.0	1.21
32	0.615	0.586	0.632	0.6	0.53	0.65	0.573	0.545	0.589	0.62	0.59	0.67	0.66	0.64	0.7
33	1.38			1.3			1.34			1.31			1.4		

Table 2. Measurements of taxonomic characters

Winged form (Unit mm)

Specific name	<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus speratus</i>			<i>speratus leptolabralis</i>		
Locality	Hakodate			Tokyo			Kyoto, Minami, Nishi-9			Osaka, Sakai			Tokushima, Naruto		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	9.0	8.04	9.09	9.15	8.8	9.3	9.0	8.9	9.1	8.8	8.5	9.0	9.0	8.7	9.3
2	4.6	4.3	5.18	6.1	5.6	6.4	4.75	4.4	5.2	4.2	3.8	4.8	5.1	4.4	5.6
3	0.48	0.432	0.528	0.412	0.408	0.455	0.4	0.38	0.4	0.47	0.43	0.5	0.42	0.36	0.48
4	0.945	0.89	0.985	0.925	0.89	0.935	0.89	0.86	0.91	0.95	0.93	0.98	0.9	0.88	0.96
5	1.35	1.32	1.39	1.32	1.3	1.36	1.22	1.17	1.24	1.23	1.2	1.27	1.25	1.2	1.3
6	1.01	0.96	1.06	0.96	0.95	1.05	0.95	0.89	1.0	0.98	0.98	0.98	0.95	0.93	1.0
7	0.192	0.192	0.192	0.267	0.264	0.278	0.254	0.24	0.264	0.23	0.21	0.26	0.197	0.16	0.24
8	0.515	0.455	0.55	0.512	0.458	0.53	0.46	0.455	0.48	0.49	0.48	0.5	0.485	0.48	0.5
9	0.3	0.288	0.323	0.325	0.311	0.335	0.3	0.28	0.31	0.29	0.288	0.31	0.3	0.264	0.31
10	0.35	0.335	0.36	0.355	0.36	0.385	0.34	0.336	0.36	0.35	0.33	0.36	0.34	0.33	0.36
11	0.353	0.351	0.355	0.338	0.33	0.348	0.32	0.312	0.366	0.35	0.33	0.36	0.33	0.32	0.336
12	0.219	0.216	0.224	0.216	0.211	0.23	0.196	0.18	0.204	0.21	0.19	0.22	0.21	0.19	0.21
13	0.192	0.181	0.205	0.168	0.146	0.19	0.17	0.16	0.18	0.178	0.16	0.194	0.18	0.168	0.19
14	0.051	0.045	0.06	0.053	0.0455	0.048	0.055	0.043	0.062	0.052	0.048	0.067	0.056	0.048	0.067
15		17	18		16	16		17	17		17	17		16	17
16	0.89	0.84	0.91	0.86	0.84	0.85	0.85	0.81	0.88	0.86	0.84	0.88	0.82	0.816	0.84
17	0.32	1.16	1.4	1.36	1.28	1.4	1.26	1.2	1.32	1.3	1.2	1.32	1.24	1.22	1.28
18	0.69	0.67	0.73	0.72	0.67	0.73	0.67	0.63	0.69	0.71	0.66	0.73	0.7	0.67	0.73
19	1.02	0.98	1.04	1.08	0.98	1.09	0.96	0.9	1.0	1.02	0.97	1.0	1.0	0.94	1.06
20	7.5	7.1	8.0	7.5	7.25	7.55	7.4	7.2	7.5	7.4	7.2	7.5	7.3	0.71	0.75
21	1.82	1.78	1.92	1.8	1.78	1.85	1.8	1.77	1.85	1.74	1.7	1.77	1.74	1.62	1.77
22	8	7	9	9.2	9	10	9.8	9	11	8.2	7	9	10	9	11
23	1 ♂	4 ♀		2 ♂	3 ♀		3 ♂	2 ♀		1 ♂	4 ♀		2 ♂	3 ♀	
24	0.93	0.86	0.98	0.97	0.91	1.0	0.95	0.9	1.0	0.97	0.75	1.0	0.93	0.90	0.97
25	1.34	1.27	1.45	1.35	1.03	1.4	1.3	1.2	1.33	1.24	1.2	1.3	1.32	1.28	1.35
26	0.6	0.54	0.61	0.61	0.6	0.62	0.58	0.57	0.61	0.6	0.57	0.62	0.59	0.57	0.61
27	0.246	0.24	0.255	0.24	0.23	0.25	0.24	0.23	0.25	0.232	0.23	0.24	0.233	0.23	0.24
28	0.114	0.06	0.15	0.23	0.12	0.29	0.126	0.12	0.13	0.16	0.12	0.22	0.128	0.1	0.15

ヤマトシロアリ属の分類学的研究 (森本)

Table 2. (Continued)

Specific name	<i>speratus leptolabralis</i>			<i>speratus leptolabralis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>		
Locality	Kagawa, Naoshima			Shimane, Matsue			Okayama, Washuzan			Ehime, Matsuyama			Fukuoka, Kashii		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	8.88	8.28	9.3	8.5	8.4	8.58	9.1	8.7	9.3	9.0	0.82	0.91	8.8	8.7	8.9
2	5.0	4.8	5.3	4.2	3.8	4.7	5.3	4.9	5.6	4.94	4.4	5.3	4.8	4.7	5.1
3	0.432	0.4	0.45	0.45	0.43	0.48	0.46	0.43	0.48	0.45	0.4	0.48	0.4	0.336	0.43
4	0.93	0.89	0.96	0.94	0.91	0.96	0.95	0.91	1.0	0.945	0.88	0.98	0.85	0.84	0.88
5	1.24	1.2	1.29	1.24	1.22	1.25	1.26	1.2	1.3	1.29	1.24	1.34	1.22	1.1	1.27
6	0.98	0.96	1.0	1.01	0.96	1.0	1.0	0.93	1.03	1.02	0.98	1.05	0.96	0.957	0.996
7	0.2	0.192	0.21	0.197	0.19	0.21	0.23	0.21	0.26	0.22	0.19	0.24	0.19	0.168	0.216
8	0.485	0.48	0.5	0.47	0.48	0.52	0.5	0.48	0.52	0.51	0.48	0.528	0.51	0.5	0.528
9	0.288	0.26	0.3	0.3	0.29	0.31	0.3	0.288	0.36	0.3	0.288	0.31	0.32	0.288	0.36
10	0.355	0.336	0.36	0.35	0.336	0.36	0.35	0.336	0.36	0.35	0.336	0.36	0.35	0.33	0.36
11	0.336	0.31	0.36	0.338	0.336	0.348	0.32	0.31	0.336	0.35	0.336	0.36	0.33	0.31	0.35
12	0.216	0.21	0.22	0.2	0.192	0.21	0.216	0.21	0.218	0.2	0.192	0.21	0.21	0.21	0.21
13	0.18	0.16	0.19	0.176	0.145	0.21	0.19	0.18	0.197	0.18	0.15	0.19	0.177	0.168	0.192
14	0.0628	0.0552	0.072	0.06	0.05	0.072	0.058	0.048	0.07	0.061	0.048	0.072	0.058	0.04	0.06
15		17	17		16	17		17	17		16	17		17	17
16	0.854	0.81	0.88	0.84	0.79	0.86	0.8	0.792	0.86	0.86	0.84	0.91	0.81	0.79	0.84
17	1.34	1.28	1.4	1.34	1.28	1.4	1.32	1.28	1.38	1.34	1.28	1.4	1.23	1.22	1.31
18	0.75	0.73	0.79	0.7	0.67	0.73	0.73	0.67	0.79	0.732	0.732	0.732	0.69	0.67	0.73
19	1.06	0.97	1.1	1.0	0.97	1.03	1.07	1.03	1.09	1.05	0.97	1.1	0.98	0.97	1.0
20	7.4	7.0	7.5	7.1	7.0	7.4	7.6	7.5	7.8	7.5	7.4	7.6	7.2	0.69	7.4
21	1.73	1.65	1.77	1.73	1.6	1.77	1.73	1.6	1.77	1.77	1.77	1.77	1.62	1.56	1.73
22	10.6	10	11	9.2	7	11	8.4	8	9	10	9	11	9	9	9
23	4 ♀	1 ♀		2 ♂	3 ♀		4 ♂	1 ♀		3 ♂	2 ♀		3 ♂	2 ♀	
24	0.94	0.92	1.0	0.94	0.92	0.97	0.95	0.92	0.97	0.91	0.88	0.93	0.88	0.85	0.92
25	1.27	1.23	1.3	1.24	1.2	1.3	1.27	1.25	1.30	1.25	1.18	1.36	1.25	1.22	1.32
26	0.61	0.6	0.64	0.62	0.6	0.7	0.62	0.61	0.63	0.61	0.55	0.63	0.6	0.6	0.6
27	0.23	0.22	0.24	0.24	0.22	0.26	0.23	0.21	0.235	0.236	0.23	0.24	0.22	0.2	0.24
28	0.15	0.1	0.2	0.14	0.11	0.16	0.12	0.09	0.15	0.12	0.1	0.18	0.17	0.11	0.22

Specific name	<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus kyushuensis</i>			<i>speratus okinawanus</i>			<i>flaviceps flaviceps</i>		
Locality	Kumamoto, Sumoto			Miyazaki			Kagoshima, Sata			Okinawa, Gogasan			Taipei, Yangmingshan		
Character	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.
1	8.4	8.1	8.7	8.9	8.7	9.0	8.9	8.5	9.3	9.5	9.1	9.7	—	—	—
2	3.7	3.2	4.4	4.8	4.4	5.1	5.24	5.0	5.6	5.47	5.3	5.6	5.1	4.7	5.4
3	0.379	0.36	0.43	0.36	0.31	0.43	0.39	0.36	0.4	0.44	0.4	0.48	0.31	0.28	0.34
4	0.86	0.816	0.88	0.84	0.79	0.91	0.86	0.84	0.88	0.92	0.88	0.96	0.98	0.96	1.0
5	1.2	1.1	1.27	1.26	1.24	1.34	1.27	1.24	1.29	1.31	1.22	1.36	1.27	1.24	1.34
6	0.94	0.93	0.948	0.98	1.0	1.01	0.97	0.96	0.98	0.99	0.93	1.03	1.0	0.98	1.03
7	0.177	0.168	0.192	0.21	0.19	0.216	0.24	0.24	0.24	0.22	0.21	0.24	0.24	0.21	0.26
8	0.5	0.456	0.504	0.54	0.52	0.55	0.5	0.48	0.504	0.5	0.456	0.504	0.51	0.5	0.55
9	0.28	0.26	0.3	0.28	0.307	0.312	0.3	0.288	0.31	0.3	0.288	0.33	0.31	0.288	0.336
10	0.36	0.36	0.36	0.36	0.36	0.36	0.34	0.336	0.36	0.35	0.336	0.36	0.36	0.36	0.36
11	0.34	0.336	0.36	0.338	0.336	0.34	0.33	0.32	0.34	0.33	0.31	0.336	0.348	0.336	0.36
12	0.229	0.21	0.24	0.215	0.2	0.22	0.21	0.19	0.23	0.22	0.216	0.23	0.23	0.21	0.24
13	0.19	0.17	0.21	0.178	0.168	0.194	0.18	0.168	0.196	0.188	0.168	0.196	0.18	0.17	0.192
14	0.054	0.048	0.069	0.052	0.048	0.055	0.038	0.033	0.048	0.044	0.04	0.05	0.037	0.024	0.048
15		17	17		16	17		17	17		17	18	—	—	—
16	0.8	0.79	0.81	0.8	0.79	0.84	0.83	0.81	0.84	0.81	0.79	0.84	0.86	0.81	0.91
17	1.26	1.22	1.28	1.31	1.22	1.34	1.26	1.22	1.28	1.3	1.2	1.34	1.46	1.40	1.52
18	0.69	0.67	0.73	0.677	0.67	0.7	0.68	0.67	0.73	0.68	0.67	0.73	0.67	0.67	0.67
19	0.95	0.91	0.976	1.0	0.9	1.03	0.97	0.915	1.03	1.0	0.97	1.03	1.0	0.97	1.03
20	7.2	7.1	7.4	7.5	7.4	7.55	7.3	7.1	7.7	7.8	7.47	8.1	—	—	—
21	1.67	1.62	1.77	1.62	1.6	1.65	1.8	1.77	1.9	1.76	1.7	1.77	—	—	—
22	9.8	9	12	9	8	10	10	9	11	10.2	9	11	—	—	—
23	3 ♂	2 ♀		4 ♂	1 ♀		3 ♂	2 ♀		2 ♂	3 ♀		2 ♂	2 ♀	
24	0.9	0.87	0.94	0.84	0.78	0.92	0.86	0.8	0.9	0.93	0.86	1.0	0.96	0.9	1.0
25	1.27	1.20	1.35	1.3	1.2	1.36	1.27	1.2	1.3	1.3	1.2	1.41	1.23	1.2	1.3
26	0.61	0.60	0.63	0.64	0.6	0.66	0.59	0.75	0.6	0.61	0.60	0.63	0.66	0.63	0.70
27	0.22	0.20	0.25	0.21	0.2	0.22	0.24	0.23	0.25	0.22	0.21	0.23	—		
28	0.15	0.1	0.2	0.16	0.1	0.22	0.12	0.11	0.15	0.16	0.12	0.22	0.2	0.2	0.2

Table 3. Localities, head indices and labral indices of *Reticulitermes speratus*

Locality	Date	Collector	Caste	Head index		Labral index	
				Range	Mean	Range	Mean
<i>Reticulitermes speratus speratus</i>							
Hakodate, Shiratori-cho	VI. 17, 66	M. MUNAKATA	S, A, W	0.628~0.714	0.671	1.00~1.11	1.06
Hokkaido, Esashi	VIII. 9, 66	T. AOYAMA	S, W, N	0.67 ~0.68	0.673		
Aomori Minamitsugaru, Hiraga	V. 1, 66	K. SHIMOYAMA	S, W	0.70 ~0.74	0.724	1.10~1.16	1.13
Iwate, Koiwai	VII. 15, 66	K. KOBAYASHI	S, W	0.67	0.67		
Iwate, Esashi, Fujisato	V. 10, 66	T. YANBE	S, W, A	0.666~0.714	0.706		
Fukushima, Okutadami	V. 1, 66	C. TSUTSUMI	S, W				
Tochigi, Nishinasu		K. MORIMOTO	S, W	0.692~0.703	0.702		
Tochigi, Ohira-yama	V. 5, 66	K. MORIMOTO	S, W, A	0.70 ~0.75	0.715	1.06~1.16	1.10
Niigata, Sado, Izumi	V. 4, 66	K. KAMIMURA	S, W	0.70 ~0.718	0.71		
Niigata, Shibata, Ishikawa-yama	VII. 18, 67	K. MORIMOTO	S, W				
Niigata, Yahiko	VII. 20, 67	K. MORIMOTO	S, W				
Ishikawa, Nonoichi	V. 14, 66	H. ISHIZAKI	S, W	0.656~0.689	0.663		
Ishikawa, Torigoe-mura	V. 7, 66	J. YAMAMOTO	S, W	0.668~0.694	0.681		
Ishikawa, Kanazawa, Isobe	V. 10, 66	H. KATSUMOTO	S, W	0.622~0.656	0.635		
Fukui, Ohno, Nakayasumi	V. 24, 66	HISAKAWA	S, W, A	0.63 ~0.678	0.649	1.1 ~1.21	1.155
Fukui, Takefu, Murakuni-yama	VI. 5, 66	H. KAMIYA	S, W	0.664~0.71	0.67		
Fukui, Takefu, Hiotani-cho	V. 10, 66	H. SHIBATA	A				
Fukui, Takefu, Ikeizumi-cho	V. 30, 66	K. FUKUDA	A				
Saitama, Koshigaya	IV. 17, 66	K. MORIMOTO	S, W, N	0.691~0.749	0.712		
Gunma, Takasaki, Tori-cho	V. 10, 67	T. KOBAYASHI	S, W, A				
Tokyo, Setagaya	V. 8, 66	K. YAMAOKA	S, W, A	0.678~0.728	0.714		
Tokyo Katsushika, Kanamachi	V. 9, 66	K. AOSHIMA	S, W, A	0.667~0.70	0.681	1.07~1.21	1.14
Tokyo, Nerima	V. 9, 66	TOBIOKA	S, W, A	0.661~0.72	0.676		
Chiba, Kanozan	X. . 66	K. MORIMOTO	S, W	0.64 ~0.712	0.685		
Shizuoka, Mt. Amagi	V. 5, 66	H. YAMAZAKI	S, W, N	0.645~0.678	0.662	1.17~1.2	1.185
Shizuoka, Toi	VI. 5, 66	K. MORIMOTO	S, W	0.66 ~0.685	0.677		

Shizuoka, Shimada, Hatsukura	VII. 12, 66	S. ASANO	S	0.65 ~0.673	0.661		
Shizuoka, Hamamatsu	IV. 28, 66	K. WATANABE	S, W, A	0.628~0.661	0.646		
Shizuoka, Arai-benten	III. 16, 66	K. MORIMOTO	S, W, N	0.642~0.663	0.650	1.07~1.21	1.132
Shizuoka, Shimizu, Miho	III. 17, 66	K. MORIMOTO	S, W	0.69 ~0.73	0.715	1.07~1.23	1.142
Izu isls., Toshima	VI. 14, 66	T. MAENAMI	S, W	0.716~0.735	0.725	1.11~1.13	1.12
Izu isls., Miyake, Tairoike	V. 5, 66	H. TAKENAKA	S, W, A	0.65 ~0.68	0.664	1.0 ~1.14	1.10
Yamanashi, Mt. Fuji (1,500m)	X. 20, 64	K. MORIMOTO	S, W	0.634~0.736	0.70	1.11~1.22	1.17
Nagano, Matsumoto	—	—	S, W	0.65	0.65	1.0	1.0
Nagano, Minamikamishiro	VII. 4, 66	Y. WATANABE	S, W	0.67 ~0.71	0.693	1.07~1.14	1.124
Nagano, Ueda, Shinshu Univ.	—, 66	H. TAKEDA	S, W				
Nagano, Nakano, Mitsuwa	V. 11, 66	S. SHIBAMOTO	S, W, A	0.667~0.743	0.711	1.0 ~1.18	1.125
Aichi, Nishikasugai, Shikatsu	V. 4, 66	M. WADA	W, A				
Aichi, Anjo, Daito-cho	V. 8, 66	K. SAMUKAWA	S, W, A				
Mie, Taki, Sewa-mura	V. 29, 66	I. HIRANO	S, W	0.662~0.72	0.688	1.12~1.25	1.188
Mie, Ichishi, Hiyama	VI. 25, 66	A. KITAMURA	S, W, N	0.607~0.71	0.66	1.05~1.22	1.136
Mie, Watarai, Omiya-cho	V. 1, 66	M. SAKABE	S, W	0.612~0.649	0.628	1.15~1.24	1.17
Gifu, Mugi, Itadori-mura	V. 9, 66	T. MISHIMA	S, W	0.642~0.71	0.638	1.06~1.19	1.12
Gifu, Ono, Asahi-mura	VIII. 4, 66	M. SATO	S				
Gifu, Kagamihara, Naka-cho	V. 12, 67	S. FUKUSHIMA	S, W, A				
Kyoto, Minami, Nishi-9	V. 8, 66	T. KIMURA	S, W, A	0.65 ~0.665	0.655	1.15~1.18	1.17
Kyoto, Ichijoji	IV. 23, 66	SAKAI, SATO	S, W, N, A	0.642~0.686	0.664	1.11~1.15	1.13
Osaka, Sakai, Umada-cho	—	S. ITO	S, W, A	0.65 ~0.685	0.67	1.10~1.17	1.15
Hyogo, Akashi, Okura	V. 19, 66	MURAMATSU	S, W, A	0.699~0.667	0.664	1.06~1.14	1.098
Kagawa, Kita, Miki-cho	IX. 5, 66	K. MATSUZAWA	S, W	0.675~0.743	0.711	1.02~1.20	1.142
<i>R. speratus speratus-speratus leptolabralis</i>							
Aichi, Nishio, Wakamatsu	IV. 25, 66	M. YAMADA	S, W	0.662~0.72	0.647	1.06~1.28	1.21
Mie, Watarai, Omiya-cho	V. 1, 66	S. SUZUKI	S, W	0.64 ~0.71	0.675	1.19~1.21	1.20
Mie, Owase	X. 19, 66	S. ASAHINA	S, W	0.664~0.715	0.692	1.14~1.27	1.202
<i>Reticulitermes speratus leptolabralis</i>							
Shizuoka, Iwata, Mitsuke	V. 5, 66	M. YOSHIDA	S, W, A	0.67 ~0.691	0.682	1.19~1.31	1.264
Aichi, Kasugai	IV. 25, 66	Y. OKADOME	S, W	0.653~0.72	0.684	1.11~1.31	1.236

Table 3. (Continued)

Locality	Date	Collector	Caste	Head index		Labral index	
				Range	Mean	Range	Mean
Mie, Ichishi, Hakusan-cho	IV. 25, 66	KITAMURA	S, W	0.638~0.66	0.654	1.12~1.28	1.216
Kyoto, Fukuchiyama	V. 11, 66	Y. KISHITANI	S, W, A	0.668~0.71	0.691	1.22~1.38	1.282
Nara, Kasugayama	V. 13, 66	K. TANI	S, W, A	0.646~0.71	0.669	1.15~1.36	1.272
Osaka, Toyonaka, Sakurazuka	IV. 16, 66	K. KAMIMURA	S, W, N	0.67 ~0.688	0.682	1.22~1.37	1.296
Wakayama, Shirahama	X. 22, 66	S. ASAHINA	S, W	0.64 ~0.675	0.658	1.07~1.39	1.212
Hyogo, Sasayama, Ohchi	VIII. 8, 66	K. IWATA	S, W	0.625~0.684	0.652	1.14~1.29	1.21
Okayama, Kibi, Ashimori-cho	IV. , 66	M. MANO	S, W, A	0.678~0.715	0.69	1.21~1.27	1.23
Shimane, Matsue, Nogi	V. 18, 66	T. MIURA	S, W, A	0.631~0.694	0.668	1.2 ~1.26	1.22
Tokushima, Tokushima, Yaso-cho	V. 14, 66	M. KIUCHI	S, W, A	0.641~0.678	0.66	1.17~1.34	1.268
Tokushima, Nishi-Iya	V. 1, 66	M. KIUCHI	S, W, A	0.666~0.75	0.7012	1.15~1.30	1.224
Kagawa, Takamatsu	V. 4, 66	S. MANABE	S, W	0.66	0.66	1.27	1.27
Kagawa, Naoshima	V. , 66	S. MANABE	S, W, A	0.67 ~0.70	0.69	1.11~1.35	1.25
Kochi, Katsurahama	III. 30, 66	K. MORIMOTO	S, W	0.667~0.72	0.71	1.22~1.29	1.25
Kochi, Kochi, Jinzenji	III. 29, 66	K. MORIMOTO	S, W, N	0.64 ~0.71	0.67	1.22~1.30	1.30
Fukuoka, Moji, Kaiin-gakko	II. 20, 66	K. MORIMOTO	S, W	0.61 ~0.64	0.63	1.22~1.27	1.25
Fukuoka, Kokura	III. —, 66	SHINOKUMA	S, W, A	0.632~0.688	0.67	1.21~1.24	1.226
<i>Reticulitermes speratus kyushuensis</i>							
Okayama, Kojima, Mt. Washu	V. 8, 66		S, W, A	0.64 ~0.69	0.66	1.08~1.18	1.122
Hiroshima, Asa, Asacho	VI. 13, 66	I. TOGASHI	S			1.14	1.14
Shimane, Yatsuka, Hoshigamiyama	IV. 24, 66	H. CHIKAKI	S, W	0.61 ~0.68	0.664	1.14~1.15	1.14
Shimane, Is. Oki	VII. 22, 66	H. YAMAZAKI	S, W	0.685	0.685	1.11	1.11
Yamaguchi, Hofu, Mitaziri	IV. 25, 66	Y. ADACHI	S, W, A	0.675~0.725	0.71	1.04~1.24	1.14
Yamaguchi, Hofu, Tonomi	VI. 13, 66	Y. ADACHI	S, W	0.715~0.762	0.736	1.07~1.12	1.098
Ehime, Niihama, Nakamura	V. 21, 66	T. MANABE	S, W	0.66 ~0.713	0.678	1.01~1.17	1.086
Ehime, Matsuyama, Misaka	IV. —, 66	S. MATSUI	S, W, A	0.615~0.705	0.65	1.06~1.16	1.11
Fukuoka, Fukuoka, Kashii	IV. 2, 66	S. MIYAMOTO	S, W, A	0.71 ~0.78	0.754	1.0 ~1.14	1.10
Fukuoka, Fukuoka, Ohara	V. 1, 66	S. MIYAMOTO	S, W	0.655~0.70	0.675	1.03~1.21	1.11

Fukuoka, Ohmuta, Uomachi	V. 2, 66	T. INOUE	S, W, A	0.652~0.712	0.676	1.11~1.23	1.162
Fukuoka, Chikugo, Izumi	V. —, 66	T. INOUE	S, W	0.665~0.73	0.695	1.03~1.19	1.118
Fukuoka, Fukuoka, Hakozaiki	II. 25, 66	K. MORIMOTO	S, W	0.69 ~0.74	0.71	1.0 ~1.16	1.14
Fukuoka, Ukiha, Ukiha	III. 12, 66	N. GYOTOKU	S, W				
Fukuoka, Ohkawa, Enokitsu	—	T. INOUE	S, W	0.68 ~0.74	0.71	1.01~1.11	1.056
Ohita, Ohita	—	IMAMURA	S, crashed			1.16~1.2	1.18
Ohita, Ohita	—	IMAMURA	S, W	0.667~0.677	0.672	1.0 ~1.17	1.086
Kumamoto, Amakusa, Sumoto	IV. 26, 66	S. HAMADA	S, W, A	0.68 ~0.80	0.73	1.06~1.21	1.14
Miyazaki, Nobeoka	IV. —, 66	H. TODAKA	S, W, A	0.691~0.726	0.71	1.09~1.22	1.138
Miyazaki, Higashimorokata, Kunitomi	—	T. NAGATOMO	S, W	0.657~0.697	0.674	1.15~1.31	1.22
Miyazaki, Gokoku-jinsha	IV. 21, 66	M. KODAMA	S, W, A				
Miyazaki, Miyazaki-jingu	IV. 21, 66	M. KODAMA	S, W, A				
Miyazaki, Miyazaki, Uchiumi	II. 23, 66	K. MORIMOTO	S, W	0.671~0.71	0.692	1.14~1.23	1.192
Miyazaki, Miyazaki, Hitotsuba	II. 23, 66	K. MORIMOTO	S, W	0.63 ~0.76	0.685	1.07~1.15	1.12
Miyazaki, Miyazaki, Hanadaono	IV. 25, 66	T. YOSHIDA	S, W, A				
Miyazaki, Miyazaki, Wanizuka	II. 23, 66	K. MORIMOTO	S, W	0.63 ~0.73	0.697	1.16~1.34	1.23
Miyazaki, Takanabe	V. —, 66	T. TATENO	S, W	0.7 ~0.8	0.76	1.13~1.20	1.167
Kagoshima, Kagoshima	IV. —, 66	NAGATA	S, W, NQ	0.644~0.80	0.717	1.13~1.154	1.168
Kagoshima, Kagoshima, Yamashita	IV. 26, 66	FUKUNAGA	W				
Kagoshima, Kagoshima, Hiyamizu	IV. 27, 66	FUKUNAGA	W				
Kagoshima, Izumi	V. 1, 66	J. TANAKA	S, W	0.61 ~0.755	0.683	1.10~1.16	1.148
Kagoshima, Ibusuki	IV. 28, 66	FUKUNAGA	S, W	0.644~0.691	0.662	1.05~1.17	1.12
Kagoshima, Sata, Odomari	IV. 24, 66	S. ITO	S, W	0.675~0.70	0.694	1.17~1.29	1.22
Nagasaki, Mogi Miyazuri	V. 19, 66	R. OHGUSHI	S, W	0.693~0.725	0.709	1.0 ~1.16	1.056
Nagasaki Higashinagasaki	VI. 22, 66	R. OHGUSHI	S, W				
Nagasaki, Nagasaki, Isecho	IV. —, 66	A. MITSUYAMA	S, W				
Nagasaki, Minamitakaki, Aeiiecho	V. 8, 66	M. HONDA	S, W, A	0.688~0.731	0.706	1.03~1.15	1.08
Nagasaki, Unzen	V. —, 66	M. HONDA	S, W, NQ				
Nagasaki, Unzen, Nitatoge	V. 11, 66	K. MORITA	S, W				

Table 3. (Continued)

Locality	Date	Collector	Caste	Head index		Labral index	
				Range	Mean	Range	Mean
Systematic position unascertainable							
Wakayama, Nachi	X. 20, 66	S. ASAHINA	W				
Kyoto	V. 8, 66	M. ASAI	A				
Wakayama, Tanabe		Y. ETO	A				
Hyogo, Kobe, Nishitarumi	V. 14, 66	H. ISHIDA	A				
Okayama, Kasaoka	V. 17, 66		A				
Okayama, Okayama, Musa	IV. 22, 66	M. KOBAYASHI	A				
Hiroshima, Mihara	V. 11, 66		A				
Hiroshima, Hiba, Takanochi	V. 31, 66	S. NAKAMURA	A				
Yamaguchi, Hofu, Migita	V. 13, 66	Y. ADACHI	W				
Yamaguchi, Asa	X. 26, 66	YOSHINO	W, A				
Ehime, Shimosugoi, Nagahamacho	V. 17, 66	K. ONISHI	W, A				
<i>Reticulitermes speratus speratus-speratus</i> <i>kyushuensis</i> ?							
Ehime, Matsuyama, Dogo	VI. 10, 66	T. KOYAMA	S, W	0.643~0.722	0.684	1.03~1.16	1.11
<i>Reticulitermes speratus okinawanus</i>							
Okinawa, Yona	19. X, 63	Y. HIRASHIMA	S, W				
Okinawa, Yona	24. III, 64	S. ITO	A				
Okinawa, Yona	21. V, 65	K. MORIMOTO	S, W	0.638~0.678	0.661	1.17~1.41	1.32
Okinawa, Gogasan	III. 64	S. ITO	S, W				
Okinawa, Shuri	4. II, 67	S. KUNIYOSHI	S, W				
<i>Reticulitermes speratus yaeyamanus</i>							
Iriomote, Hateruma-mori	5. X, 63	K. MORIMOTO	S, W				

Iriomote, Shirahama	4. X, 63	K. MORIMOTO	S, W, 1 Q	0.592~0.694	0.623	1.14~1.42	1.25
Ishigaki, Yoshihara	15. X, 63	K. MORIMOTO	S, W				
Ishigaki, Omotodake	14. X, 63	K. MORIMOTO	S, W				

Table 4. Coloration of the adult pronotum of *R. speratus*

Locality	I	II	III	IV	V
Hakodate, Shiratoricho	5	2	23	—	—
Iwate, Esashi, Fujisato	6	—	1	—	—
Tochigi, Ohirayama	18	6	6	—	—
Fukui, Ohno	2	7	9	—	—
Tokyo, Setagaya	9	2	6	—	—
Tokyo, Kanamachi	20	—	—	—	—
Shizuoka, Mt. Amagi	12	2	2	—	—
Shizuoka, Hamamatsu	3	9	2	1	—
Shizuoka, Iwata	6	7	1	—	—
Fukuoka, Kashii	6	5	1	1	—
Okinawa, Gogasan	20	—	—	—	—

I : Pronotum entirely yellow.

II : Pronotum yellow with a pair of small transverse patches.

III : Pronotum yellow with a pair of large transverse patches.

IV : Pronotum dark brown with a yellowish cruciform patch.

V : Pronotum entirely brownish.

- middle. Gula broader, gular index I more than 0.3..... 3
- 3 : Labrum slender, with long paraterminal setae *flaviceps* OSHIMA..... 4
- 3' : Labrum without paraterminal setae or the setae minute.....*speratus* KOLBE 5
- 4 : Right mandible with the inner margin straight and curved inwards at tip
.....*flaviceps flaviceps* OSHIMA
- 4' : Right mandible with the inner margin gently curved*flaviceps amamianus* subsp. nov.
- 5 : Labrum broader, labral index less than 1.2 in average 6
- 5' : Labrum slenderer, labral index more than 1.2 in average 7
- 6 : Setae on labrum and clypeus longer in general. Labrum subpentagonal, subangulate at
the broadest point. Frontal convexity slightly weaker.
.....*speratus kyushuensis* subsp. nov.
- 6' : Dorsal setae of labrum and clypeal setae absent or minute. Sides of labrum rounded.
Frontal convexity a little stronger*speratus speratus* KOLBE
- 7 : Sides of labrum weakly concave before the broadest portion., Head broadest a little
behind the middle and tapering thenceforth*speratus okinawanus* subsp. nov.
- 7' : Sides of labrum convex 8
- 8 : Head with the sides more or less rounded, broadest behind the middle. Head index more
than 0.65 in average.....*speratus leptolabralis* subsp. nov.
- 8' : Head parallel-sided. Head slenderer, head index less than 0.65 in average, much paler
.....*speratus yaeyamanus* subsp. nov.

Winged form

To separate the winged form of *speratus* into subspecies presents difficulties. Winged form of *chinensis* and *miyatakei* remains unknown to the author.

- 1 : Gula and circumgular area same color as pronotum, yellowish. Setae on head a little
closer and longer*flaviceps flaviceps* OSHIMA
- 1' : Gula and circumgular area same color as cranium, blackish brown. Setae on head a
little shorter and sparser.....*speratus* KOLBE

1. *Reticulitermes chinensis leptomandibularis* HSIA & FANG

Reticulitermes chinensis leptomandibularis HSIA & FANG, Acta Ent. Sinica 14 (4) : 375, 1965
Specimens examined : Wulai near Taipei, 27. V. 1965, K. MORIMOTO leg. (Soldiers and
workers).

Distribution : China. Taiwan (New record).

These specimens well fit the description of *chinensis leptomandibularis* given by HSIA and
FANG.

2. *Reticulitermes miyatakei* sp. nov.

Type colony : Santaro-toge. Amami-Oshima, 2. XI. 1966, Y. MIYATAKE leg. (Soldiers and
workers). Paratypes : Ohara. Tokunoshima, 8. XI, 1966, Y. MIYATAKE leg. (Soldiers and
workers).

Distribution : Amami-Oshima, Tokunoshima.

Soldier : Head with the lateral sides straight and tapering to the broadly rounded posterior
side. Frontal area weakly convex. Mandibles strongly curved inwards at tip like *curvatus*.
Labrum broader, labral index 1.0~1.21, dorsal setae short in general, rarely long. Clypeal
setae short. Gula slender, gular index I less than 0.3 in average.

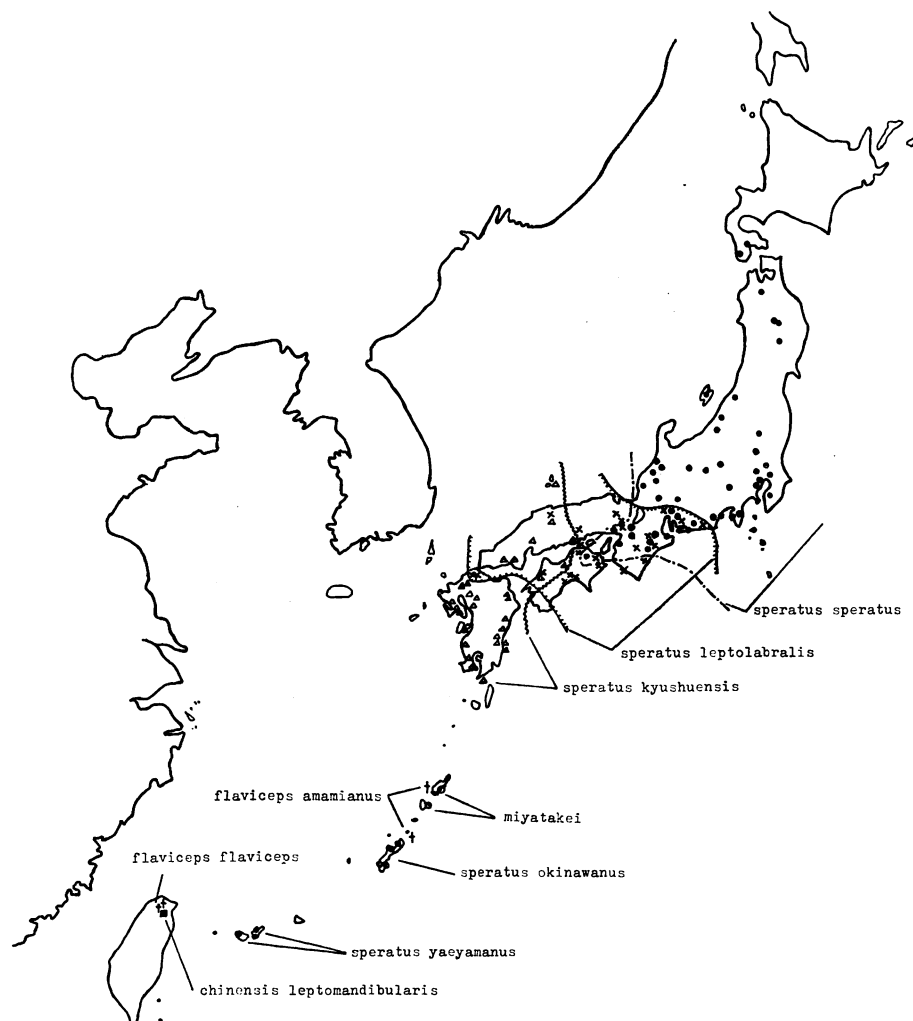


Fig. 11 Distribution map.

Winged form : unknown.

This species is similar to *curvatus* HSIA & FANG, 1965, from China, having strongly curved mandibles at tip, but may easily be separable from it by the shape of head, smaller body and broader labrum. This is also similar to *clypeatus* LASH, 1951, from Jerusalem, having the broadest head in front, but the mandibles curved more strongly and the head distinctly larger.

3. *Reticulitermes flaviceps* OSHIMA

Termes speratus : OSHIMA, Zool. Mag. XX : 514, 1908

Leucotermes speratus : SHIRAKI, Trans. Ent. Soc. Japan II : 230, 1909

Termes (Leucotermes) flavipes : OSHIMA, First Offic. Rep. : 30, 1909 ; Zool. Mag. XXII : 345, 1910

Leucotermes flavipes : OSHIMA, Second Offic. Rep. : 3, 1911

Termes flaviceps : OSHIMA, Ins. World XV : 356, 1911

Leucotermes flaviceps: OSHIMA, Third Offic. Rep. : 74, 1912; Philipp. J. Sci. D, VIII : 277, 1913 *Reticulitermes flaviceps*: LIGHT, Lingnan Sci. J. 7 : 589, 570, 1929 - Snyder, Smithson. Misc. Coll. 112 : 72, 1949

Leucotermes speratus: HOLMGREN, Annot. Zool. Jap. VIII : 124, 1912 (partim)

Leucotermes (Reticulitermes) speratus: HOLMGREN, K. Svenska Vetensk. Handlingar. 50 : 61, 1913 (partim) - HOZAWA, J. Coll. Imp. Univ. Tokyo XXXV (7) : 62, 1915 (partim)

Reticulitermes speratus: Ahmad, Biologia 4 : 71, 72, 1958 (partim) - TSAI & CHEN, Economic Ins. China VIII Termites : 60, 1964 (partim)

Soldier : Head slenderer, parallel-sided or slightly narrowed anteriorly. Labrum slender, labral index 1.21~1.46, paraterminal setae long. Clypeal setae long. Pronotum with the posterior margin weakly notched at the middle.

Winged form (based on the dealate two pairs taken at Yangmingshan) : Head with the gular and circumgular regions same color as pronotum, yellowish. Head with setae a little longer and closer than in *speratus*. Pronotum with the posterior margin weakly notched at the middle.

3A. *Reticulitermes flaviceps flaviceps* OSHIMA

Specimens examined : Sokei, Taipei Hsien, 17. VI. 1964, S. ITO leg. (Soldiers, Workers). Chikushiko, Taipei Hsien, 24. VI. 1964, S. ITO leg. (Soldiers, Workers). Yomeisan (Yangmingshan), Taipei Hsien, 21. VI. 1964, S. ITO leg. (Soldiers, Workers); 25. V. 1965, K. MORIMOTO leg. (2 Male, 2 Female, Soldiers, Workers).

Distribution : Taiwan

Soldier : Inner margin of the right mandible straight and curved inwards at tip. Head longer, subparallel or slightly tapering anteriorly.

This subspecies was first identified by OSHIMA (1908) as *speratus*, and OSHIMA (1909) changed his opinion and reported it as *flavipes*. OSHIMA (1911) gave a new name, *flaviceps*, to the common termite in Taipei and described it in Japanese together with the comparison of Taiwan species with true *flavipes*. OSHIMA (1912) described *flaviceps* as a new species from Botel-Tobago or Kashoto, a small island south-east off Taiwan, but said nothing about his *flaviceps* from Taipei. OSHIMA (1912) published another report on termites from the Bureau of Railways, of which the contents are the same as his third official report on termites, except the following statement on termite from Taipei that the common termite in Taipei is closer to *flaviceps* than to *speratus*.

According to the principle of priority in Zoological Nomenclature, *Termes flaviceps* OSHIMA (1911) based on "common termite" from Taipei is the valid original description, and *flaviceps* OSHIMA (1912) from Botel-Tobago is a synonym of it.

R. flaviceps of OSHIMA from Botel-Tobago seems to be a little different from that of Taipei judging from the comparison of the descriptions given by OSHIMA and presumable to the author that it has a close relation to *fukienensis* or *speratus yaeyamanus* rather than to *flaviceps* of Taipei.

LIGHT (1931) distinguished the adult of *fukienensis* from *flaviceps* by the coloration of pronotum as follows :

flaviceps and *speratus* : Pronotum yellow, without pigmented area.

fukienensis : Pronotum yellow but with scattered pigmented spots.

This character is, however, rather variable in *speratus* as shown in Table 4, and seems to

be insufficient for the separation of species on it.

This subspecies is much closer to *fukienensis* than to *speratus*.

3B. *Reticulitermes flaviceps amamianus* subsp. nov.

Type colony : Yuwandake, Amami-Oshima, 4. XI. 1966, Y. MIYATAKE leg. (Soldiers, Workers). Paratypes : Yoron Is. 17. I. 1964, M. SAKAE leg. (Soldiers, Workers).

Distribution : Amami-Oshima, Yoron Is.

Soldier : Head tapering anteriorly from the broadest portion a little behind the middle. Right mandible with the inner margin gently curved.

Winged form : unknown.

4. *Reticulitermes speratus* KOLBE

Termes speratus KOLBE, Berl. Ent. Zschr. XXIX : 147, 1885 – MATSUMURA, Thous. Ins. Jap. I : 24, 1904 ; Konchu Bunruigaku : 188, 1908 – OSHIMA, Zool. Mag. XX : 514, 1908 (partim) ; Ins. World XV : 356, 1911

Termes (Leucotermes) speratus : DESNEUX, Gen. Ins. Isoptera : 33, 1904

Termes flavipes : OSHIMA, Zool. Mag. XX : 515, 1908

Leucotermes flavipes : SHIRAKI, Trans. Ent. Soc. Japan II : 230, 1909

Leucotermes speratus : OSHIMA, Zool. Mag. XXII : 414, 1910 ; Third Offic. Rep. : 71, 1912 ; PHILIPP. J. Sci. D, VIII : 277, 1913 – Nawa, Ins. World XIV : 547, 1910 ; Ins. World XVI : 17, 1912 – YANO, Ins. World XIV : 601, 1910 ; Zool. Mag. XXII : 354, 1911 ; Rep. Forest Exp. Sta. 10 : 109, 1913 – HOLMGREN, K. Svenska Vetensk. Handlingar. 46 : 69, 1911 ; Annot. Zool. Jap. VIII : 124, 1912 (partim)

Leucotermes (Reticulitermes) speratus : HOLMGREN, K. Svenska Vetensk. Handlingar. 50 : 61, 1913 – HOZAWA, J. Coll. Sci. Imp. Univ. Tokyo XXXV (7) : 62, 1915 (partim).

Reticulitermes speratus : LIGHT, Lingnan Sci. J : 589, 1929 – SNYDER, Smithsonian. Misc. Coll. 112 : 74, 1949 – AHMAD, Biologia 4 : 71, 72, 1958 (partim) – TSIA & CHEN. Economic Ins. China VIII Termites : 60, 1964 (partim).

Reticulitermes flaviceps : HSIA & FANG, Acta Ent. Sinica 14 : 363, 1965

Soldier : Head with the frontal area distinctly convex. Labrum without paraterminal setae and blunt at tip. Head parallel-sided or broadest behind the middle.

Winged form : Gula same color as cranium, blackish brown. Head with setae sparser and shorter. Pronotum yellow, very often with brownish patches (see Table 4).

This species has a wide range of distribution from Hokkaido to China, and Japanese species is separable into five subspecies as described below.

4A. *Reticulitermes speratus speratus* KOLBE

Specimens examined : see Table 3.

Distribution : Hokkaido to Kinki District of Honshu, Kagawa.

Soldier : Head with the frontal area distinctly convex. Labrum subovate with round tip, labral index 1.0~1.2, dorsal setae absent or minute. Clypeal setae absent or minute.

Specimens taken from Hokkaido, Nagano, Morioka and Mt. Fuji have a broader labrum with broad tip. Several colonies taken from Aichi and Mie Prefectures are regarded as an intermediate between *speratus speratus* and *speratus leptolabralis*.

4B. *Reticulitermes speratus leptolabralis* subsp. nov.

Type colony: Yami, Tokushima City, 14. V. 1966, M. KIUCHI leg. (Winged forms, Soldiers and Workers). Paratypes: see Table 3. Distribution: Iwata City to Kokura City.

Soldier: Head similar to *speratus speratus*. Labrum slender, labral index 1.15~1.39, more than 1.2 in average. Dorsal setae of labrum and clypeal setae minute or absent.

4C. *Reticulitermes speratus kyushuensis* subsp. nov.

Type colony: Kashii, Fukuoka City, 29. IV. 1966, S. MIYAMOTO leg. (Soldiers, Workers and Winged forms). Paratypes: see Table 3.

Distribution: Okayama to Kyushu.

Soldier: Head slightly darker than the other subspecies of *speratus* in general, frontal convexity weaker. Labrum subpentagonal, subangulate at the broadest point a little behind the middle, labral index 1.0~1.23, less than 1.2 in average. Dorsal setae of labrum and clypeal setae longer.

One colony taken from Matsuyama may be an intermediate between *speratus speratus* and *speratus kyushuensis* having labrum similar to the former in shape, but the arrangement of setae is to the latter. Three colonies from Miyazaki and Kagoshima have a somewhat more slender labrum than the typical one (labral index more than 1.2 in average), but the shape and the setal arrangement of labrum reveal the consubspecific with it.

4D. *Reticulitermes speratus okinawanus* subsp. nov.

Type colony: Yona, Okinawa, 21. V. 1965, K. MORIMOTO leg. (Soldiers, Workers). Paratypes: see Table 3.

Distribution: Okinawa

Soldier: Labrum slender, labral index 1.17~1.41, more than 1.3 in average. Sides of labrum weakly concave before the broadest portion. Dorsal setae of labrum and clypeal setae short.

4E. *Reticulitermes speratus yaeyamanus* subsp. nov.

Type colony: Shirahama, Iriomote, 4. X. 1963, K. MORIMOTO leg. (Soldiers, Workers). Paratypes: see Table 3.

Distribution: Iriomote, Ishigaki.

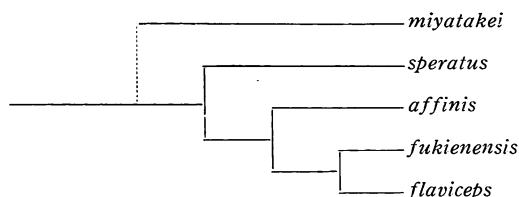
Soldier: Head pale, whitish, only the anterior part brownish. Head parallel-sided, slender, head index less than 0.65. Labrum slender, labral index 1.14~1.42, more than 1.2 in average.

Phylogenetic consideration

Up to the present time twenty species of the genus *Reticulitermes* have been recorded from the temperate regions of the northern hemisphere, and the distribution of species with yellow pronotum in the adult restricted to China, Taiwan and Japan. They are *affinis* HSIA & FANG from Chekiang to Kwangtung, *fukienensis* LIGHT from Anhwei to Kwangtung, *flaviceps* OSHIMA from Taiwan, and *speratus* KOLBE from Japan and the major part of China from Shangtung to Yunnan. *R. fukienensis*, *affinis* and *flaviceps* have a close relationship with one another in having slenderer and parallel-sided head and labrum with paraterminal setae. *R. fukienensis* and *flaviceps* are very close to each other, and could possibly be treated as conspecific, but *affinis* is much larger.

Comprehensive consideration of the present distribution of the named species leads to the conclusion that *speratus* migrated probably into Japan via Corea from the north, and *flaviceps* (including *fukienensis*) from southern China to Taiwan. After the separation of Japan, Ryukyus and Taiwan into islands, *speratus* differentiated into subspecies and *flaviceps* differentiated from continental *fukienensis*.

Relationship of these species may be illustrated as follows :



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ヤマトシロアリ属の分類学的研究

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(摘 要)

日本および台湾のヤマトシロアリ属については、分類学上2つの意見があった。その1つは大島(1921)らによるもので、同属の2種が存在するとされており、他の1つは矢野(1910)らによるもので、1種のみが存在するとされていた。

その後、世界各地の同属の種が再検討されて、多くの種に分けられているが、日本においては久しい間研究が行なわれていなかった。たまたま、シロアリの被害現地において、加害習性の異なるヤマトシロアリがみられたことから、筆者はヤマトシロアリ属の再検討を行ない、日本および台湾には4種が存在し、そのうち2種は、さらに亜種に分けられることを確かめた。

この報告では、ヤマトシロアリ属の研究史、兵蟻および有翅虫についての分類上の特徴ならびに種と亜種の検索について述べ、アマミシロアリ(新種)の記載のほか、キアシシロアリには1新亜種を、ヤマトシロアリには4新亜種を記載して整理し、上記の結論にいたった経過を明らかにするとともに、それらの類縁関係についても論じた。

日本および台湾における種・亜種とその分布は次のとおりである。

1. *Reticulitermes chinensis leptomandibularis* HSIA & FANG トガリシロアリ(新称)〔台湾(新記録)〕
2. *R. miyatakei* MORIMOTO, sp. nov. アマミシロアリ(新称)〔奄美大島〕
3. *R. flaviceps* OSHIMA キアシシロアリ
 - (A) *R. flaviceps flaviceps* OSHIMA 〔台湾〕
 - (B) *R. flaviceps amamianus* MORIMOTO, subsp. nov. 〔奄美大島、与論島〕
4. *R. speratus* KOLBE ヤマトシロアリ
 - (A) *R. speratus speratus* KOLBE 〔北海道から近畿地方まで、香川県〕
 - (B) *R. speratus leptolabralis* MORIMOTO, subsp. nov. 〔静岡県磐田市以西～北九州門司・小倉まで、四国〕
 - (C) *R. speratus kyushuensis* MORIMOTO, subsp. nov. 〔岡山県鷲羽山以西の中国地方・九州、松山市〕
 - (D) *R. speratus okinawanus* MORIMOTO, subsp. nov. 〔沖縄本島〕
 - (E) *R. speratus yaeyamanus* MORIMOTO, subsp. nov. 〔石垣島、西表島〕

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