

KEY TO THE MARQUESAN SPECIES OF TERMITES, WITH  
RECORDS OF HOST PLANTS AND DISTRIBUTION \*

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In a previous paper<sup>47</sup> the termites collected by the Pacific Entomological Survey in the Marquesas were reported as belonging to seven species, of which three were described as new. Since then several additional collections have been received, all but one of which belong to previously listed species. One, considered to be new, was described as *Kalotermes (Glyptoterme)s juddi*<sup>48</sup> in honor of Albert F. Judd, President of the Board of Trustees of Bernice P. Bishop Museum.

It seems worth while at this time to give a working key to the species known from the Marquesas and to give the complete collection records, including localities, the altitude at which taken, the food plants, the dates of collection, and the reproductives collected. The last two items are given since they throw light on the life cycle, particularly as to the time of emergence and swarming of alates.

Key to the Termites of the Marquesas

Alates

1. No fontanel; wing scales large, forewing scale overlapping hindwing scale.....2  
Fontanel present (tiny); wing scales smaller; forewing scale not overlapping hindwing scale.....**Coptoterme)s pacificus** Light
2. Small species; head about 1 mm. wide; median vein unchitinized, curving up to join radius sector near middle of wing.....3  
Larger species, head more than 1.25 mm. wide; median vein chitinized, close to or coalescent with radius sector.....5
3. Small, head about 0.80 mm. wide without eyes; brown, wings light brown with conspicuous coarse papillations.....**Kaloterme)s (Cryptoterme)s dolei** Light  
Larger, head more than 0.90 mm. wide; yellow to light brown, wings hyaline, papillations inconspicuous.....4
4. Larger, head about 1 mm. wide without the eyes; pronotum less than half as wide as long; wing papillations very fine and inconspicuous.....  
.....**Kaloterme)s (Cryptoterme)s piceatus** Snyder  
Smaller, head less than 0.95 mm. wide without eyes; pronotum more than half as long as wide; wing papillations coarse but inconspicuous because hyaline.....  
.....**Kaloterme)s (Cryptoterme)s hermsi** Kirby

<sup>47</sup> Light, S. F., Termites from the Marquesas: B. P. Bishop Museum, Bull. 98, Pacific Ent. Survey Pub. I, art. 6, 1932.

<sup>48</sup> Light, S. F., *Kaloterme)s (Glyptoterme)s juddi*, a new species of termite from the Marquesas Islands: B. P. Bishop Mus., Bull. 98, Pacific Ent. Survey Pub. I, art. 18, 1932.

\* Pacific Entomological Survey Publication I, article 19, issued November 22, 1932.

5. Very dark to black; median coalescent with radius sector.....  
 .....**Kaloterms (Metaneoterms) athertoni** Light  
 Lighter, brown to yellow; median separate.....6
6. Very large, head more than 2 mm. wide; median chitinized, running close to radius  
 sector and sending many branches to it.....  
 .....**Kaloterms (Neoterms) connexus** Snyder  
 Smaller, head less than 1.3 mm. wide; median unchitinized, midway between cubitus  
 and radius sector.....**Kaloterms (K.) immigrans** Snyder  
 (The alate of *K. (Glyptoterms) juddi* Light is unknown, but may be distinguished  
 by having the median chitinized and lying near the radius sector but without branches  
 to it.)

## Soldiers

1. Head yellow, ovate; with large anterior fontanel emitting sticky milky fluid;  
 mandibles smooth.....**Coptoterms pacificus** Light  
 Head blackish, brown, red-brown or reddish yellow, subrectangular; without fontanel;  
 mandibles heavily toothed .....2
2. Head short, high, approximately cubical, truncated in front with nearly vertical or  
 excavated frons; mandibles weak .....3  
 Head and mandibles normal .....5
3. Larger, anterior half of head marked with conspicuous wrinkles, a conspicuous de-  
 pression in mid-dorsal region.....**Kaloterms (Cryptoterms) piceatus** Snyder  
 Smaller, head not especially rugose and lacking mid-dorsal depression.....4
4. Head about as broad as long with slight median notch; frons overhanging, frontal  
 rim not strongly flaring at sides.....**Kaloterms (Cryptoterms) hermsi** Kirby  
 Head clearly longer than broad, frontal rim flaring broadly at sides; deeply notched  
 in center; frons less than vertical.....**Kaloterms (Cryptoterms) dolei** Light
5. Small; head dull brown, usually not more than 1.10 mm. wide; head rather high and  
 box-like with precipitous frons.....**Kaloterms (Glyptoterms) juddi** Light  
 Larger; head bright reddish-brown or reddish-yellow, usually more than 1.5 mm. wide;  
 head relatively low, frons with gentle slope.....6
6. Third antennal segment very slightly if at all enlarged; a large species, head usually  
 2.5 mm. or more in width.....**Kaloterms (Neoterms) connexus** Snyder  
 Third antennal segment enlarged and elongated; smaller.....7
7. Pronotum nearly half as long as wide, anteriorly deeply notched; posterior margin  
 nearly straight.....**Kaloterms (K.) immigrans** Snyder  
 Pronotum much less than half as wide as long, anterior margin weakly emarginate,  
 posterior margin sinuous.....**Kaloterms (Metaneoterms) athertoni** Light

Collection Records for Termites Taken in the Marquesas Islands

(Place names as on collection labels.)

Island	Locality	Altitude in feet	Date	Food Plant	Remarks	
1. <i>Kalotermes (Neotermes) connexus</i> Snyder						
Uahuka	Hanatekeo, Hane Valley	1,300	2-25-31	<i>Aleurites moluccana</i>	Alates in colony	
	Hanatekeo, Hane Valley	1,200	2-25-31	<i>Hibiscus tiliaceus</i>		
	Hanatekeo, Hane Valley	1,300	2-25-31	<i>A. moluccana</i>	Alates in colony	
	Hanatekeo, Hane Valley	920	2-24-31	<i>H. tiliaceus</i>		
	Hanatekeo, Hane Valley	800	2-24-31	<i>H. tiliaceus</i>		
	Putatauuu, Vaipae Valley	880	9-21-29	<i>H. tiliaceus</i>	Pair; incipient colony	
	Putatauuu, Vaipae Valley	880	9-21-29	<i>H. tiliaceus</i>	Alates in colony	
	Putatauuu, Vaipae Valley	880	9-21-29	<i>H. tiliaceus</i>	1 dealate	
	Vaipae Valley	270	3- 3-31	<i>H. tiliaceus</i>	1 dealate	
	Hitikau Ridge	2,300	3- 3-31	<i>H. tiliaceus</i>	Alates in colony	
	Crest of North Range	2,350	9-23-29	<i>H. tiliaceus</i>		
	Haapaoaiki	700	2-27-31	<i>Pandanus</i> species		
	Haapaoaiki	700	2-27-31	<i>H. tiliaceus</i>		
	Tehaevea, Hane Valley	500	2-27-31	<i>Callophyllum inophyllum</i>		
	Hane Ridge	1,570	2-26-31	<i>Glochidion rhamiflorum</i>		
	Penau Ridge	2,000	3- 5-31	<i>H. tiliaceus</i>	Alates in colony	
	Penau Ridge	2,000	3- 5-31	<i>H. tiliaceus</i>	2 dealates	
	Eiao	Towards northeast side	1,850	9-29-29	<i>H. tiliaceus</i>	Pair
		Towards northeast side	1,850	9-29-29	<i>H. tiliaceus</i>	Pair
		Towards northeast side	1,850	9-29-29	<i>H. tiliaceus</i>	Alates in colony
(None given)		2,000	4-21-31	<i>H. tiliaceus</i>		
Uapou	Near middle, east side	1,650	9-29-29	<i>Pandanus</i> species		
	Hakahetau Valley	800	12-10-29	Guava (dead trunk)	Alates in colony	
	Hakahetau Valley	2,000	12- 6-29	<i>H. tiliaceus</i>	1 dealate	
	Hakahetau Valley	1,000	12-23-29	Dead <i>Aleurites moluccana</i>		
	Hakahetau Valley	1,250	9-16-31	Dead <i>Aleurites moluccana</i>		
	Vaikokoo, Paaumea Valley	1,850	11-31-31	<i>H. tiliaceus</i>	Alates in colony	
	Paaumea Valley	2,500	11-26-31	<i>H. tiliaceus</i>	Alates in colony	
	Vaihakaatiki, Hakahetau Valley	2,500	11-18-31	Dead <i>tiliaceus</i>		
	Teavanui	2,900	11-30-31	Dead <i>tiliaceus</i>	Alates in colony	
	Koputukea, Hakahetau Valley	1,250	11-16-31	Dead <i>tiliaceus</i>	Dealate in colony	
Tahuata	Hanateio Valley	635	7-24-30	<i>Aleurites moluccana</i>	Alates in colony	
	Tutaipuna, Vaitahu Valley	1,400	6-12-30	Dead logs		
	Kiinui	1,210	6-14-30	<i>H. tiliaceus</i>		
	Tehue Valley	650	5-27-30	<i>H. tiliaceus</i>		
	Amatea	2,100	6-30-30	<i>H. tiliaceus</i>		
	Amatea	2,630	6-27-30	<i>H. tiliaceus</i>		
	Amatea	2,630	6-27-30	<i>H. tiliaceus</i>		
	Hanamia Valley	500	5-30-30		1 dealate	
	Hanamia Valley	1,500	6- 4-30		1 dealate	
	Vaitupaahi	2,400	7- 8-30	<i>Weinmannia</i> species	2 dealates	

## Collection Records for Termites Taken in the Marquesas Islands—Continued

(Place names as on collection labels.)

Island	Locality	Altitude in feet	Date	Food Plant	Remarks
Hivaoa	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Alates
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	1 dealate
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Alates in colony
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Pair; incipient colony
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Alates
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Pair
	Vaioa	1,200	7-26-29	<i>H. tiliaceus</i>	Alates in colony
	Vaioa	1,200	7-26-29	<i>Piper latifolium</i>	Pair
	Anatuakina	1,525	6- 1-29	<i>Sapindus saponaria</i>	Pair
	Tehueto Valley	600	3- 8-29		Alates in colony
	Tehueto Valley	200	3- 8-29		1 dealate
	Tehueto Valley	500	3- 9-29		Alates in colony
	Tehueto Valley	.....	3- 8-29		Alates in colony
	Tenatiaei	3,760	8- 3-29	<i>Reynoldsia</i> species	
	Vaiepoepo	2,330	6- 2-29	<i>H. tiliaceus</i>	1 dealate
	Vaiepoepo	2,170	6- 2-29	<i>Pandanus</i> species	1 dealate
	Matauuna	3,900	3- 3-30	<i>Sclerotheca</i> species	
	Matauuna	3,900	3- 3-30	<i>Cheirophyllum</i> species	2 dealates
	Teava uhia i te kohu (above Puamau)	2,100	2-15-30	<i>H. tiliaceus</i>	Alates and dealates
	Aimoa	500	2-22-29	<i>H. tiliaceus</i>	Alates in colony
	Aimoa	500	2-22-29	<i>H. tiliaceus</i>	
	Mt. Temetiu	3,620	7-24-28	<i>Reynoldsia</i> species	1 dealate
	Pouau	500	3- 5-29		Alates in colony
Tapeata	750	5-25-29			
Fatuhiva	Ihiota, Hanavave Valley	600	9-10-30	<i>H. tiliaceus</i>	2 dealates
	Ihiota, Hanavave Valley	460	9-10-30	<i>H. tiliaceus</i>	
	Punahitahi, Oomoa Valley	650	8-18-30	<i>H. tiliaceus</i>	
	Otomaha, Oomoa Valley	280	8-20-30	<i>Carissa grandis</i>	
	Vaikoao, Oomoa Valley	1,600	8-30-30	<i>Pandanus</i> species	
	Vaikoao, Oomoa Valley	1,500	8-30-30	<i>H. tiliaceus</i>	
	Tepeia, Oomoa Valley	300	8-16-30	<i>H. tiliaceus</i>	
	Teaotu, Hanavave Valley	1,000	9- 2-30	<i>H. tiliaceus</i>	
	Teavaione, Oomoa Valley	1,700	8-29-30	<i>H. tiliaceus</i>	
	Nukuhiva	Taipivai	15	11-20-29	(at light)
Hivaoa	2. <i>Kalotermes (K.) immigrans</i> Snyder				
	Atuona Valley	100	3- 6-29	Orange tree ( <i>fide</i> a native)	Dealates and alates
	Atuona Valley	.....	May, 1929	(at light)	Wing
	Atuona Valley	.....	2-15-29	(at light)	Alates
	Atuona Valley	.....	May, 1929	(at light)	Alate and dealates
	Atuona Valley	.....	6- 6-29	(at light)	Alates
	Atuona Valley	.....	2-16-29	(at light)	Alates

Collection Records for Termites Taken in the Marquesas Islands—Continued

(Place names as on collection labels.)

Island	Locality	Altitude in feet	Date	Food Plant	Remarks	
3. <i>Kaloterms (Metaneoterms) athertoni</i> Light						
Uahuka	Tauheeputa	1,770	3-23-31	<i>H. tiliaceus</i>		
	Haahue Valley	90	3-20-31	<i>Pandanus</i> species		
Nukuhiva	Crest of North Range	2,350	9-23-29	<i>H. tiliaceus</i>	Pair, incipient colony	
	Matukuāha	1,570	2-27-31	<i>Glochidion rhamiflorum</i>	Dealate only	
	Tapuaooa	3,100	11-14-29	<i>H. tiliaceus</i>	1 dealate and 1 alate in colony	
	Tapuaooa	2,600	5-30-31	<i>Metrosideros collina</i>		
	Tapuaooa	3,100	11-14-29	<i>H. tiliaceus</i>	2 dealates	
	Tapuaooa	3,100	11-14-29	<i>H. tiliaceus</i>	1 dealate	
	Tapuaooa	3,100	11-14-29	<i>H. tiliaceus</i>	3 dealates	
	Tekao Hill	3,150	.....		1 dealate	
	Ooumu	3,000	5-28-31	<i>Weinmannia</i> species	2 dealates	
	Ooumu	3,500	11-10-29		1 dealate	
	Teuanui, Toovii	2,000	10-27-29	<i>H. tiliaceus</i>	Pair	
	Tuanui, Toovii	2,000	10-27-29	<i>H. tiliaceus</i>	4 dealates	
	Tuanui, Toovii	2,000	10-27-29	<i>H. tiliaceus</i>		
	Tuanui, Toovii	2,000	10-27-29	<i>H. tiliaceus</i>	Pair	
Tuanui, Toovii	2,000	10-25-29	<i>H. tiliaceus</i>			
Tuanui, Toovii	2,000	10-25-29	<i>H. tiliaceus</i>	2 dealates in colony		
Fatuhiva	Vaikoao, Oomoa Valley	1,600	8-29-30	<i>H. tiliaceus</i>		
Tahuata	Hanamiai Valley	1,500	6- 4-30		1 dealate	
Uapou	Papaika	1,000	12-14-29	<i>H. tiliaceus</i>		
Hivaooa	Koputukea, Hakahetau Valley	1,150	11-16-31	<i>H. tiliaceus</i>	Alates in colony	
	Tenaeka Valley	1,100	6- 4-29	<i>H. tiliaceus</i>	1 dealate	
	Tenaeka Valley	1,100	6- 4-29	<i>H. tiliaceus</i>	4 dealates	
	Tenaeka Valley	1,100	6- 4-29	<i>H. tiliaceus</i>	2 dealates	
	Atuona Valley	50	3-28-29	Mango	1 dealate	
	Aimoa	500	2-22-29	<i>H. tiliaceus</i>		
	Aimoa	500	3- 7-28	<i>H. tiliaceus</i>	Alates and dealates	
	Tapeata	750	5-25-29	<i>H. tiliaceus</i>		
	Pouau	500	3- 5-29		Alates in colony	
	Vaioa	1,200	7- 6-29	<i>H. tiliaceus</i>	Pair	
Eiao	Vaioa	1,200	7- 6-29	<i>H. tiliaceus</i>	Pair	
	Anatuakina	1,525	6- 1-29	<i>Sapindus saponaria</i>	Pair	
	Kopaafaa	2,900	2-26-30	<i>Crossostyles biflora</i>	1 dealate	
	4. <i>Kaloterms (Cryptoterms) dolei</i> Light					
	Uahuka	Haahue Valley	260	3-20-31	<i>Sapindus saponaria</i>	
Nukuhiva	Taiohae	.....	Oct., 1929		1 alate	
Uapou	Manueva	500	12-17-29	<i>Morinda citrifolia</i>		
Eiao	Middle of island, east side	1,700	4-22-31	<i>S. saponaria</i>	Alates in colony	
		1,665	9-28-29	<i>H. tiliaceus</i>	2 dealates	

## Collection Records for Termites Taken in the Marquesas Islands—Continued

(Place names as on collection labels.)

Island	Locality	Altitude in feet	Date	Food Plant	Remarks
Fatuhiva	Ouia Valley	100	9- 2-30	<i>H. tiliaceus</i>	
Hivaoa	Tehueto Valley	200	3- 8-29		2 dealates
	Anatuakina	1,525	6- 1-29	<i>S. saponaria</i>	Alates in colony
	Anatuakina	1,525	6- 1-29	<i>S. saponaria</i>	
	Anatuakina	1,525	6- 1-29	<i>Xylosma suaveolens</i>	
	Anatuakina	1,525	6- 1-29		
	Atuona Valley	150	3-28-29	Mango	2 dealates
	Atuona Valley	.....	2-25-29		
	Atuona Valley	150	3-28-29	Mango	1 dealate
Mohotani		700	1-31-31	<i>Cordia subcordata</i>	1 dealate
		1,300	1- 2-31	<i>Sapindus saponaria</i>	Alates in colony
		400	1-31-31	<i>Sapindus saponaria</i>	
	Above Anaoa	350	8-13-29	<i>Sapindus saponaria</i>	
5. <i>Kaloterms</i> ( <i>Cryptoterms</i> ) <i>hermsi</i> Kirby					
Hivaoa	Atuona	.....	Feb., 1929		4 dealates—1 alate
	Atuona	.....	May, 1929		1 alate
	Atuona	30	3-28-29	Mango	
	Atuona	50	3-28-29	Mango	Pair
Tahuata	Hanahevane Valley	300	7-16-30	<i>S. saponaria</i>	Alates in colony
	Hanahevane Valley	300	7-16-30	<i>S. saponaria</i>	Alates in colony
6. <i>Kaloterms</i> ( <i>Cryptoterms</i> ) <i>piceatus</i> Snyder					
Hivaoa	Atuona	Near Sea Level	Feb., 1929	(at light)	Alates
7. <i>Kaloterms</i> ( <i>Glyptoterms</i> ) <i>juddi</i> Light					
Uahuka	Tehaeyea, Hane Valley	500	2-27-31	<i>Calophyllum inophyllum</i>	
8. <i>Coptoterms pacificus</i> Light					
Hivaoa	Atuona	.....	Feb., 1929	(at light)	Dealates and alates