

VATACARUS (IGUANACARUS) INTERMEDIUS,
A THIRD CHIGGER MITE FROM THE NASAL FOSSAE
OF THE MARINE IGUANA IN THE GALAPAGOS ISLANDS
(ACARINA : TROMBICULIDAE) ¹

BY

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A third species of the subgenus *Iguanacarus* has gone unrecognized until now. Four specimens have been found sporadically in sympatric association with *V. (I.) amblyrhynchus* and *V. (I.) intranasalis*. The new species is characterized by a scutal form intermediate to those of the other two species, and which resembles a typical *Microtrombicula* scutum. In all other characters it is a typical *Iguanacarus*, and we therefore describe it as :

***Vatacarus (Iguanacarus) intermedius*, n. sp.**

(fig. 6)

A. — *Description* :

1) *Measurements* : in micra, of the holotype and three paratypes compared with the mean measurements of *V. (I.) amblyrhynchus* and *V. (I.) intranasalis*.

	AW	PW	ASB	PSB	SD	AP	AM	AL	PL
Holotype =	75	84	45	35	80	36	42	35	74
Pt. 1 =	80	88	47	40	87	40	45	35	74
Pt. 2 =	78	90	48	37	85	32	41	36	73
Pt. 3 =	71	79	42	36	78	39	40	34	70
	S	H	D	V	pa	pm	pp	Ip	
Holotype =	94	86	75/70	47/75	524	442	520	1496	
Pt. 1 =	100	80	75/70	47/80	555	465	560	1580	
Pt. 2 =	98	80	75/72	48/75	560	470	550	1580	
Pt. 3 =	90	68	65/56	44/60	472	430	480	1382	

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Means	AW	PW	ASB	PSB	SD	AP	AM	AL	PL
<i>interm.</i>	74	85	32	37	83	37	42	35	73
<i>ambly.</i>	117	112	43	40	99	61	81	71	106
<i>intran.</i>	78	73	40	36	80	51	54	50	94
	S	H	D	V	pa	pm	pp	Ip	
<i>interm.</i>	96	76	72/67	46/73	528	452	528	1508	
<i>ambly.</i>	123	105	101/80	47/80	603	537	602	1742	
<i>intran.</i>	103	92	79/67	43/70	486	434	492	1412	

2) *Scutum* : (fig. 6). Pentagonal and much like that of *Microtrombicula* ; punctation dense and well marked ; scutal setae straight, slightly flexible and ornamented with scarce, short barbs ; sensillae flagelliform, bearing a few minute ciliae ; AL very short in comparison to those of the two other species of *Iguanacar*. Biocellate eyes.

3) *Idiosoma* : Body appearance very similar to that of the two other species. Body pilosity formulae, compared to those of *amblyrhynchus* and *intranasalis* :

$$\begin{aligned}
 fD &: \textit{intermedius} = 2H + 6.6.6.4.2 = 26 \\
 &\textit{amblyrhynchus} = 2H + 6.6.6.4.2 = 26 \quad \text{dorsal setae} \\
 &\textit{intranasalis} = 2H + 6.6.8.8.6 = 36 \\
 fV &: \textit{intermedius} = 10.10.6.6.4.4.4.4.2.2 = 56 \\
 &\textit{amblyrhynchus} = 8.8.6.4.8.8.4.4.6.4.2.2 = 64 \quad \text{ventral setae} \\
 &\textit{intranasalis} = 8.8.8.6.6.6.2 = 44 \\
 NDV &: \textit{intermedius} = 82 \\
 &\textit{amblyrhynchus} = 90 \quad \text{body setae} \\
 &\textit{intranasalis} = 80
 \end{aligned}$$

Uropore between the fourth and fifth ventral rows of setae.

4) *Legs* : Fairly long ; $Ip = 1508$, intermediate to that of *amblyrhynchus* (1742) and *intranasalis* (1412).

$$fsp = 7.7.7, fCx = 1.1.1 \text{ and } fSt = 2.2$$

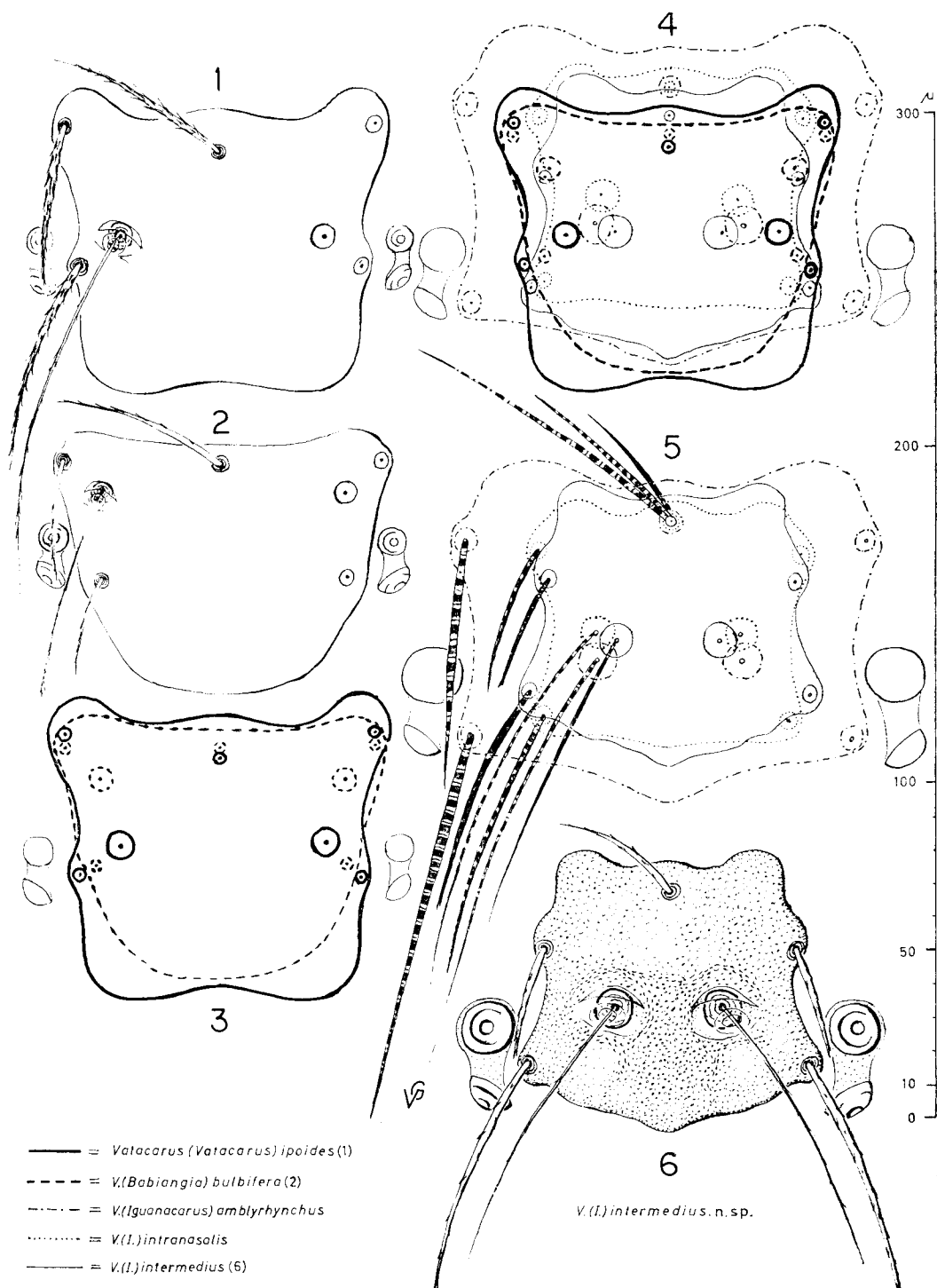
Genuae (1, 2, 3) and tibiae (3) as follows : $ga = 3$, $gm = 1$, $gp = 1$ and $tp = 1$. On leg 1, the two internal genuae are inserted more proximally than the external one (as in *amblyrhynchus* and *intranasalis*) ; in contrast to *amblyrhynchus* and *intranasalis*, the setae behind the solenidions (tarsus I and tibia 1) are branched, never nude. Mastitarsala 3, as in *intranasalis*, with basal ciliae.

5) *Gnathosoma* : Robust, similar to that of *intranasalis*. Galeal setae nude. Powerful palps ; palpal formula :

$$fPp = (B)-(B)-(N).N.B.G_2-E.B.B.B.S.B.(B).(B).(B) \text{ and } fT = 7B.S.$$

B. — *Locality and Date* : Santa Cruz, Galapagos Islands, Ecuador ; 24 February, 1964.

C. — *Host and Parasitope* : *Amblyrhynchus cristatus* ; nasal fossae.



Genus *Vatacarus* - Scutum studies.

D. — *Type Material* : Holotype. 24264/C/2/1 deposited in the U. S. National Museum, Washington D. C., and 3 paratypes numbered 24264/C/2/2 to 24264/C/2/4.

E. — *Discussion* : We consider it pertinent to show the relationships among scutal shapes in *Vatacarus* s. str. (fig. 1), *Babiangia* (fig. 2) and *Iguanacarus* (fig. 5).

Figure 1 represents the scutum of *V. ipoides*, figure 2 that of *B. bulbifera*. The two are superposed in figure 3. The following features are to be noticed here :

1. — The five scutal setae are nearly congruent, as are the eyes.
2. — The SB is large.
3. — The only major divergence is in the relative positions of the sensilla bases ; closer to the PLs in *Vatacarus* s. str., closer to the ALs in *Babiangia*.
4. — The scutal setae are straight and thick in both cases.

Figure 5 represents the scuta of the three known species of *Iguanacarus* in superposition. The following features are to be seen :

1. — The AM bases are congruent.
2. — The scutum of *V. (I.) intermedius* appears to be a bilaterally reduced version of that in *V. (I.) amblyrhynchus*. The reduction is allometric, so that, in contrast to all other known *Vatacarus*, $PW > AW$.

Figure 4 shows the scuta of the following five *Vatacarus* superposed so that the eyes are congruent at the center of the anterior lens : *V. (V.) ipoides*, *V. (B.) bulbifera*, *V. (I.) amblyrhynchus*, *V. (I.) intermedius* and *V. (I.) intranasalis*.

F. — *Conclusion* : This study of evolution in scutal form shows some very interesting genealogical traits, and indicates the proximity of *Vatacarus* and *Eutrombicula* (7) on the one hand, and *Vatacarus* and *Microtrombicula* on the other. The scutum of *Babiangia* (2) relates to that of *Eutrombicula* (*Siseca*) (1) ; and the scutum of *Vatacarus* s. str. markedly resembles that of *Iguanacarus*, which is closely related to *Microtrombicula* (5).

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