

Arn. which again is a taxonomic synonym of *Staphylosyce barteri* Hook. f. transferred to *Coccinia* by Keay².

The species *Ruthalicia eglandulosa* (Hook. f.) Jeffrey is widely distributed all over Ghana. It is an extensive dioecious climber which has creamy yellow flowers with digital five-lobed leaves. The fruits when ripe have an attractive crimson colour with yellow patches. The ovules are arranged horizontally over the inner wall of the triplacentiferous unilocular ovary and are completely wrapped over in beaded fashion by a yellow succulent placental membrane. A second finely hyaline tissue covers the black and somewhat bluntly deltoid seeds.

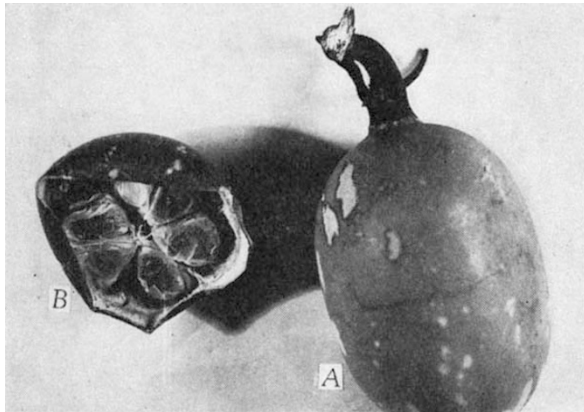


Fig. 1. A, Fruit of *Ruthalicia eglandulosa* ($\times c. 0.65$); B, cross-section of the same ($\times c. 0.65$).

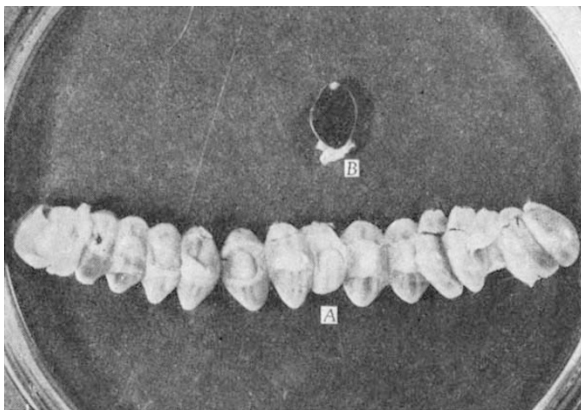


Fig. 2. A, Chain of seeds wrapped over by the placenta ($\times c. 0.9$); B, a single seed, placenta removed ($\times c. 0.9$).

The seeds are packed up serially in six rows bilaterally and attached to a parietal placental rod or axis and wrapped over by the cloth of placental membrane. The vertical placental axis is formed by the fusion of two contiguous vascular strands of the carpel margins. When slightly pressed, the placenta detaches itself from the vertical placental axis in the form of a perfect chain enclosing the seeds like a beaded necklace (Fig. 2A) and it spreads automatically when placed on a Petri dish filled with water. The succulent yellow placenta is partially dissolved into mucilaginous consistency when the fruit ripens and the contents are invariably caten in the wild state by birds or other animals. Seldom is an intact ripe fruit found in nature. The empty shells of the fruits are often found hanging on the vine with pulp completely caten away. When unripe the shell is hard and is green in colour with a few white stripes radially disposed at the

apical part. On keeping, the green area turns brilliantly crimson and the white stripes yellow within two weeks and the hard shell softens considerably. If not disturbed the fruit keeps well for over a month or more under room temperature. Morphology of this peculiar placenta is being investigated.

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¹ Jeffrey, C., *Kew Bull.*, 15, 3, 360 (1962).

² Keay, R. W. J., *Kew Bull.*, 8, 82 (1953).

Polymorphism in the Spider, *Theridion ovatum*

REFERENCE has often been made¹⁻³ to the colour varieties of *Theridion ovatum*. According to Locket and Millidge⁴, the abdomen may have one of three colour patterns: Clerk's *lineatum*, abdomen creamy white; Clerk's *redimitum*, abdomen with a pair of wide longitudinal carmine stripes; Clerk's *ovatum*, abdomen dorsally covered with carmine. Field observations confirm that these varieties are polymorphic, in accordance with the accepted definition⁵ for genetic polymorphism.

Counts of the three varieties in the field indicate that populations are panmictic, and a computation of the type used to determine the frequency of MN blood groups⁶ suggests that the colour varieties, *lineatum* and *ovatum*, are under the control of a single pair of alleles. The heterozygote, which shows incomplete dominance with respect to abdominal colour, is *redimitum*.

The following results are derived from counts by Nielsen² and Bristowe³. Nielsen made counts in two separate habitats, while Bristowe's figures represent the sum total of many counts. The frequencies of the three forms of spider are found to vary between populations, a point which is made by Bristowe. Separate and total counts provide independent material with which to test whether the observed data differ significantly from what is expected with the Hardy-Weinberg law.

Table 1. COMPARISON OF OBSERVED AND EXPECTED FREQUENCIES OF VARIETIES OF *Theridion ovatum*

Variety	No.	Percentages		χ^2
		Observed	Expected	
<i>Lineatum</i>	55	55.0	51.8	1.98
<i>Redimitum</i>	34	34.0	40.4	1.01
<i>Ovatum</i>	10	10.0	7.8	0.62
			Total 3.61, $P > 0.10$	
<i>Lineatum</i>	19	33.9	37.9	0.42
<i>Redimitum</i>	31	55.4	47.3	1.39
<i>Ovatum</i>	6	10.7	14.7	1.09
			Total 2.90, $P > 0.20$	
<i>Lineatum</i>	2,714	64.24	63.7	0.004
<i>Redimitum</i>	1,316	31.15	32.2	0.034
<i>Ovatum</i>	195	4.16	4.0	0.001
			Total 0.039, $P > 0.98$	

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¹ Gerhardt, U., *Arch. Naturg.*, 87, 78 (1921).

² Nielsen, E., *The Biology of Spiders*, 1, 194 (Copenhagen, 1932).

³ Bristowe, W. S., *The World of Spiders*, 216 (Collins, London, 1958).

⁴ Locket, G. H., and Millidge, A. F., *British Spiders*, 2, 76 (Ray Society, London, 1953).

⁵ Ford, E. B., *Ecological Genetics*, 84 (Methuen, London, 1964).

⁶ Stern, C., *Principles of Human Genetics*, 159 (W. H. Freeman, San Francisco, 1960).