First Record of the Social Spider *Cyrtophora citricola* (Araneae: Araneidae) in the Bahamas

Cyrtophora citricola (Forskål) constructs a compound web in which the horizontal webs of the many individual spiders are interconnected (Buskirk 1975). It is native to the Old World (Levi 1997), but introduced by unknown means to several Neotropical territories, including the Dominican Republic (Alayón *et al.* 2001), Haiti (Starr 2005) and Cuba (Alayón 2003). We report here for the first time its presence in the Bahamas.

On 1 January, 2011, with the dry season already well underway, we found a series of aggregations of this species on Great Inagua. This island, at the southeastern end of the Bahamas chain, has an area of 1544 km^2, a dry climate (annual rainfall about 1000 mm) and relatively low vegetation (few trees above three metres).

The aggregations were on both sides of a country road through more or less natural habitat near the saline Lake Windsor (21°04'N, 73°34'W). All but two compound webs were on nearly leafless *Lycium americanum* (Solanaceae). This low, relatively dense shrub has narrow branches (diameter about 3 mm) without thorns. The silk was concentrated on the outside of the shrubs, with much less in the interior. The nearly leafless state of the shrubs was more likely a seasonal phenomenon than the result of blockage of photosynthesis due to the silk, as this did not seem very dense, and we noted the same condition in most *L. americanum* without webs.

Our search revealed 20 aggregations, all at the sides of the road. Almost all had an estimated volume of 0.5 m^3 or less (Table 1). The single exception (no. 3) extended for about three meters parallel to the road. Consistent with previous observations of this species in the Neotropics, the population was concentrated in a particular area, the two limits separated by about 141 m. We did not find *C. citricola* elsewhere in the island, nor had our ecotourist guide, Colin Ingraham.

We observed three other spiders in association with *C. citricola* webs: one individual each of *Leucauge argyra* (Tetragnathidae) and *Nephila clavipes* (Nephilidae) on the periphery and several of *Argyrodes elevatus* in the interior. Members of these genera have previously been reported in association with *C. citricola* (Leborgne *et al.* 1998; Rypstra 1979).

Mr. Ingraham led us to a place about 50 m beyond the last aggregation where he had noted two larger compound webs some months before, but there was no sign of either. This agrees with our impression of instability in aggregations of other Neotropical spiders such as *Anelosimus eximius*, *A. rupununi*, *Nephila clavipes* and *Philoponella republicana*. In our experience, even aggregations of hundreds of individuals can vanish over just a few weeks.

ACKNOWLEDGEMENTS

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Table 1. Enumeration of a series of 20 compound webs of the spider *Cyrtophora citricola* in Great Inagua, Bahamas. All figures are by visual estimation. "Other side" indicates a position more or less directly across on the other side of the road.

Number	Volume	Distance from Preceding Web
1	0.5 m^3	--
2	<0.5 m^3	other side
3	1.5 m^3	32 m
4	0.5 m^3	<1 m
5	<0.5 m^3	5 m
6	<<0.5 m^3	other side
7	<<0.5 m^3	1 m from no. 5
8	0.5 m^3	3 m
9	<<0.5 m^3	5 m
10	<0.5 m^3	23 m
11	a few liters	1 m
12	<<0.5 m^3	1 m
13	<<0.5 m^3	other side
14	<<0.5 m^3	1 m
15	<<0.5 m^3	1 m
16	<<0.5 m^3	1 m
17	<<0.5 m^3	5 m
18	<<0.5 m^3	3 m
19	a few liters	58 m
20	a few liters	1 m

REFERENCES

Alayón, G. G. 2003. *Cyrtophora citricola* (Araneae: Araneidae), registro nuesvo de araña para Cuba. *Cocuyo,* 13: 14.

Alayón, G. G., de Armas, L. F. and **Abud, A. J.** 2001. Presen-

cia de *Cyrtophora citricola* (Forskål 1775) (Araneae: Araneidae) en las Antillas. *Revista Ibérica de Aracnología,* 4: 9-10.
Buskirk, R. E. 1975. Coloniality, activity patterns and feeding in a tropical orb-weaving spider. *Ecology,* 56: 1314-28.
Leborgne, T., Cantarella, T. and **Pasquet, A.** 1998. Colonial life versus solitary life in *Cyrtophora citricola* (Araneae: Araneidae). *Insectes Sociaux,* 45: 125-34.
Levi, H. W. 1997. The American orb-weavers of the genera *Mecynogea*, *Manogea*, *Kapogea* and *Cyrtophora*. *Bulletin of the Museum of Comparative Zoology,* 155: 215-55.
Rypstra, A. L. 1979. Foraging flocks of spiders: A study of aggregate behavior in *Cyrtophora citricola* Forskål (Araneae: Araneidae) in West Africa. *Behavioral Ecology and Sociobiology,* 5: 291-300.
Starr, C. K. 2005. Observaciones sobre *Cyrtophora citricola* (Araneae: Araneidae) en Haití. *Cocuyo,* 15: 15.

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IN MEMORIAM

Julius O. Boos

1946 - 2010

A member of the Trinidad and Tobago Field Naturalists' Club of long standing, Julius Boos died in Miami on 11 July, 2010. He was an ardent and exuberant member of the Club when he lived in Trinidad. He has written many articles in our journal and was the senior author of a paper which described the Inca beetle *Inca clathrata quesneli* Boos and Ratcliffe which appears on the title page of Living World. An account of his life is given by his brother Hans Boos in the "Field Naturalist", our quarterly Bulletin, issue 3, July-Sept., 2010. p. 16-18.

The Editorial Committee extends its condolences to Hans and the rest of the family.