



**INTRODUCTION OF THE EXOTIC TICK AMBLYOMMA  
CHABAUDI RAGEAU (ACARI: IXODIDAE) INTO FLORIDA  
ON IMPORTED TORTOISES**

Authors: Simmons, Leigh-Anne, and Burridge, Michael J.

Source: Florida Entomologist, 85(1) : 288-289

Published By: Florida Entomological Society

URL: [https://doi.org/10.1653/0015-4040\(2002\)085\[0288:IOTETA\]2.0.CO;2](https://doi.org/10.1653/0015-4040(2002)085[0288:IOTETA]2.0.CO;2)

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](https://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

## INTRODUCTION OF THE EXOTIC TICK *AMBLYOMMA CHABAUDI* RAGEAU (ACARI: IXODIDAE) INTO FLORIDA ON IMPORTED TORTOISES

LEIGH-ANNE SIMMONS AND MICHAEL J. BURRIDGE

Department of Pathobiology, University of Florida, P.O. Box 110880, Gainesville, FL 32611-0880

International trade in live reptiles has been ongoing for many years, with the pet trade component of this enterprise a significant end-user of live tortoises, turtles, lizards and snakes (Roth & Merz 1997). In the United States, the pet trade is responsible for more than 80% of the total world trade in reptiles (Hoover 1998). Many of these reptiles enter the United States through Florida. Studies conducted by the University of Florida between 1997 and 1999 showed that 10 exotic tick species have been imported into Florida on reptiles (Burrige et al. 2000, Simmons & Burrige 2000), including six species of *Amblyomma* and four species of *Aponomma*. Some of these tick species can transmit disease agents of animal or public health significance (Burrige 2001) and, thus, research is underway in the authors' laboratory to define measures to minimize the introduction and spread of exotic ticks. Recently, we detected yet another exotic tick species, *Amblyomma chabaudi* Rageau, that has been introduced into Florida on imported tortoises. Details of this introduction are described herein.

In collaboration with the Florida Fish and Wildlife Conservation Commission, the authors initiated studies of reptiles recently imported into Florida through the Miami International Airport. One such shipment involved 125 spider tortoises (*Pyxis arachnoides*) imported from Madagascar to a reptile dealer in South Florida. Nineteen of the tortoises were infested with 23 adult ticks, 21 and 2 of which were attached to the rear and front legs, respectively. All ticks were identified as male *Amblyomma chabaudi* Rageau. Sample specimens were submitted to the National Veterinary Services Laboratory in Ames, Iowa, for species confirmation, with accession No. 95109.

This is the first report of *A. chabaudi* in the United States and the first report of this tick outside of Madagascar. *Amblyomma chabaudi* was first described in 1963 infesting a spider tortoise in Madagascar (Rageau 1964). Since that time, three publications regarding this species (Uilenberg 1965, 1967, Uilenberg et al. 1979) have shown *A. chabaudi* distributed only in southern Madagascar and have indicated a limited host range. All published records of *A. chabaudi* are from spider tortoises, except for one male on a radiated tortoise (*Geochelone radiata*) (Uilenberg et al. 1979), with both tortoise species limited in natural distribution to Madagascar (Alderton 1988). However, Uilenberg (1967) was able to feed *A. chabaudi* in the laboratory on radiated tortoises, Madagascar flat-shelled tortoises (*Pyxis*

*planicauda*) and rabbits. Thus, in the absence of its preferred host, the spider tortoise, *A. chabaudi* could infest other host species. Nothing is known of the potential of *A. chabaudi* to transmit diseases or regarding its potential environmental impact in Florida.

The work described in this report was supported by U.S. Department of Agriculture Tropical/Subtropical Agricultural Research grant no. 00-34135-9814. The authors are grateful to James Mertins of the U.S. Department of Agriculture in Ames, Iowa, for confirmation of the identity of these exotic ticks found in Florida and to Lieutenant Patrick Reynolds of the Florida Fish & Wildlife Conservation Commission for assistance with access to the premises of the reptile importer.

### SUMMARY

This is the first report of the ixodid tick, *Amblyomma chabaudi* Rageau, in the United States. It was introduced into the United States on spider tortoises (*Pyxis arachnoides*) imported from Madagascar to a reptile dealer in Florida. Information on the few published reports on this exotic tick is reviewed.

### REFERENCES CITED

- ALDERTON, D. 1988. Turtles & tortoises of the world. Facts on File, Inc., New York, 191 pp.
- BURRIDGE, M. J. 2001. Ticks (Acari: Ixodidae) spread by the international trade in reptiles and their potential roles in dissemination of diseases. Bull. Entomol. Res. 91: 3-23.
- BURRIDGE, M. J., L. A. SIMMONS, and S. A. ALLAN. 2000. Introduction of potential heartwater vectors and other exotic ticks into Florida on imported reptiles. J. Parasitol. 86: 700-704.
- HOOVER, C. 1998. The U.S. role in the international live reptile trade: Amazon tree boas to Zululand dwarf chameleons. TRAFFIC North America, Washington, D.C., 59 pp.
- RAGEAU, J. 1964. Une nouvelle espèce d'*Amblyomma* parasite de tortues Malgaches *A. chabaudi* n. sp. (Acariens Ixodidae). Bull. Soc. Pathol. Exot. 57: 408-411.
- ROTH, H. H., AND G. MERZ. 1997. Wildlife resources: a global account of economic use. Springer-Verlag, Berlin, Germany, 403 pp.
- SIMMONS, L. A. AND M. J. BURRIDGE. 2000. Introduction of the exotic ticks *Amblyomma humerale* Koch and *Amblyomma geoemydae* (Cantor) (Acari: Ixodidae) into the United States on imported reptiles. Internat. J. Acarol. 26: 239-242.

- UILENBERG, G. 1965. *Amblyomma chabaudi* Rageau, 1964 (Ixodidae). Description de la femelle et de la nymphe. Variations morphologiques du mâle. Ann. Parasitol. Hum. Comp. 40: 681- 691.
- UILENBERG, G. 1967. *Amblyomma chabaudi* Rageau, 1964 (Ixodidae). Elevage au laboratoire. Description de la larve. Observations complémentaires sur la nymphe. Ann. Parasitol. Hum. Comp. 42: 343-351.
- UILENBERG, G., H. HOOGSTRAAL, AND J. M. KLEIN. 1979. Les tiques (Ixodoidea) de Madagascar et leur role vecteur. Arch. Inst. Pasteur Madagascar, numéro spécial, 153 pp.