

BACTÉRIAS DO GÊNERO *Rickettsia* EM CARRAPATOS COLETADOS DE AVES DA COSTA RICA

BACTERIA OF THE GENUS *Rickettsia* IN TICKS COLLECTED FROM WILD BIRDS IN COSTA RICA

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The aim of this study was to document the presence *Rickettsia* spp. in ticks parasitizing wild birds in Costa Rica. Birds were trapped at various locations in Costa Rica in 2004, 2009, and 2010 and visually examined for the presence of ticks. Seven study sites on both the Caribbean and Pacific slopes of Costa Rica included Hitoy Cerere Biological Reserve, Barbilla National Park, Tapantí National Park, Rincón de la Vieja National Park, Braulio Carrillo National Park, and Zona Protectora Las Tablas. Ticks were identified and tested individually for the presence of *Rickettsia* spp. by polymerase chain reaction (PCR) using primers targeting fragments of the rickettsial genes *gltA* and *ompA*. PCR products were DNA-sequenced and analyzed in BLAST to determine similarities to known *Rickettsia* species. A total of 1878 birds of 217 species were examined. A total of 161 birds (8.6%) were infested with 388 ticks of two genera: *Ixodes* (170) and *Amblyomma* (218). *Ixodes* were represented for at least three species: *Ixodes minor* (10L), *Ixodes* species I (20L, 18N, 6A), *Ixodes* species II (4L, 3N), and *Ixodes* spp. (83L, 26N). *Amblyomma* were represented by *A. longirostre* (18L, 8N), *A. calcaratum* (6L, 4N), *A. coelebs* (4N), *A. sabanerae* (3L, 1N), *A. maculatum* (1N), *A. ovale* (1N), *A. varium* (2L) and 170 larvae identified only as *Amblyomma* spp. Twelve of 24 (50%) *A. longirostre* were found to be infected with *Rickettsia amblyommii*, and 2 of 4 *A. sabanerae* were found to be infected with *Rickettsia bellii*. Eight of 10 (80%) larval *Ixodes minor* were infected with endosymbiont previously found in *Ixodes scapularis* ticks. In the present work we provide new information about ticks parasitizing wild birds and in Costa Rica



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