ABSTRACT  In January 2001, while conducting a survey of the tick fauna of the State of Rondônia, Brazil, a rural area within Monte Negro county was visited. On one farm within the county the producer maintained a herd of crossbred swine, Sus scrofa L., that was reared under unconfined conditions, with unrestrained access to the pasture and adjacent native Amazon equatorial forest. Inspection of the swine herd produced a total of 77 ticks collected from eight adult pigs (mean, 9.6 ticks per pig) that were identified as Amblyomma naponense (Packard) (26 males, eight females), A. oblongoguttatum Koch (five males, three females), A. ovale Koch (one female) and A. scalpturatum Neumann (one male). One Amblyomma larva and 32 Amblyomma nymphs also were collected from the pigs. Of these, six nymphs were reared in the laboratory until they reached the adult stage, one being an A. oblongoguttatum female and five being A. scalpturatum females.

KEY WORDS  Amblyomma naponense, Amblyomma scalpturatum, Amblyomma oblongoguttatum, Amblyomma ovale, ticks, swine
species from the Amazon region infesting domestic pigs that have been introduced by humans.

**Materials and Methods**

During a survey of the tick fauna in Rondônia during January 2001, we visited a farm in the county of Monte Negro (10° 18' S; 63° 14' W), located at an altitude of ≈206 m. The hot, moist weather was characterized by high levels of precipitation that averaged 2,000 mm annually, with a moderate drought period from April to October. It had a mean temperature that ranged from 25 to 29°C and from 70 to 80% RH throughout the year (Meteorological Station of the Advanced Research Center, University of São Paulo, Monte Negro, RO). The farm had ≈300 beef cattle as the major livestock activity reared in unconfined pastures composed mainly of *Brachiaria decumbens* Stapf. In addition, the farm had a domestic crossbred swine herd (*S. scrofa*) that consisted of 14 adults (two boars, three Finish pigs, nine sows) and 15 piglets reared for subsistence. All the pigs were reared unconfined and had unlimited access to pasture and to adjacent forest that was composed of native Amazon equatorial vegetation. However, all pigs were conditioned, at least once a day, to come to the ranch facility where they were fed with corn (Fig. 1 and 2). The sound of the owners motorcycle every day “called” the pigs: the animals have associated the engine sound with offered corn. We confirmed this on our visit. Pigs returned to the pastures and adjacent forests after feeding on the corn. According to the farm residents, the adjacent forest areas were permanently inhabited by wild pigs (*Tayassu spp*), tapirs (*Tapirus terrestris* L.), and capybaras (*Hydrochaeris hydrochaeris* Erxleb).

We examined eight adult pigs from the farm swine herd as they were feeding on the corn. Each pig was examined individually and each tick was placed in a dry glass vial with some vegetation and transported alive to laboratory for examination. Whenever possible, immature ticks were reared using rabbit hosts until they reached the adult stage for species identification. They were maintained in an incubator at 25°C and 90% RH for molting.

**Results and Discussion**

A total of 77 ticks was collected from eight adult pigs (mean, 9.6 ticks per pig). Four species were identified as *A. naponense* (26 males, eight females), *A. oblongoguttatum* (five males, three females), *A. ocale* (one female) and *Amblyomma sculpturatum* Neumann (one male). One *Amblyomma* larva and 32 *Amblyomma* nymphs were also collected from the pigs. Of these, six nymphs were reared in the laboratory to the adult stage, one being an *A. oblongoguttatum* female and five being females of *A. sculpturatum*. All ticks were deposited in the FMVZ National Tick Collection, University of São Paulo, São Paulo, SP (accession numbers 410, 426, 427).

*Amblyomma naponense* was found on all pigs examined. This tick was previously recorded mainly from wild pigs (*Tayassu spp.*) from Brazil and other Latin America countries (Aragão 1911, 1936; Fairchild et al. 1966; Jones et al. 1972; Need et al. 1991). The other tick species reported in this study were also reported primarily from tapirs, wild pigs (*Tayassu spp.*), and capybaras. These wild mammal species were reported to...
be common in the forested areas adjacent to the farm and the presence of ticks found on the domestic pigs was probably a result of their movement into the forest habitat. Further research should be conducted to determine whether domestic pigs would be suitable hosts for one or more *Amblyomma* species in the Amazon area, in the absence of wild hosts. The findings of immature *A. oblongoguttatum* and *A. scapulatum* on domestic pigs suggested that they could be serving as hosts for all parasitic stages of these ticks. *Amblyomma oblongoguttatum* and *A. ovale* have also been reported on domestic pigs in Panama (Fairchild et al. 1966). In southern Brazil, pigs are usually reared in total confinement, which avoids tick infestation from wild life sources. Nevertheless, the situation described here possibly reflects new host–parasite associations particular to the Amazon region, where native hosts and ticks cohabit in an area invaded by domestic pigs. In view of the fact that all the tick species found on the pigs have been reported to infest humans (Aragão and Fonseca 1961, Fairchild et al. 1966, Labruna et al. 2000), these findings could have important implications for the potential transmission of tick-borne diseases to humans, because the pigs were in daily contact with humans. Although there is no available information regarding tick-borne pathogens infecting the *Amblyomma* species from the Amazon region, research is in progress to evaluate such possibility.

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