To the Editors:

Intra-aural ecdysis of *Dermacentor auratus* Supino, 1897, in a human host

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Reports on otoacariasis (intra-aural tick infestations) are common at ear, nose and throat (ENT) clinics in Sri Lanka [1, 2]. *Dermacentor auratus* (Acarina: Ixodidae) is the most commonly reported tick species associated with human otoacariasis [1]. It has a three-host life cycle involving different host species for each stage of its life cycle (larva, nymph and adult), and is distributed throughout the oriental region. The wild pig is one of the major hosts for adult *D. auratus*, and it also parasitizes a number of mammals (domestic pig, bear, rhinoceros and deer) as well as reptiles (python). Larvae feed mainly on *Rattus spp.* and carnivores. The nymphal stages have been known to infest man [1, 3]. Here we report an unusual occurrence of an intra-aural ecdysis

of a male *D. auratus* nymph stage, into an adult within the human host.

The specimen was collected from the ear canal of a 51 year old female who complained of an earache and sought treatment at the Kandy General Hospital. The specimen was removed by an ENT specialist and preserved in 95% ethanol. The specimen was identified under light microscopy as an adult male *D. auratus*. It had an intact nymphal cuticle at the time of collection (Figure 1).

Although *D. auratus* is a three-host tick, it may go through a two-host life cycle as well, and therefore, ecdysis within an ear canal may not be surprising.

Figure 1. *Derma-centor auratus* specimen found in the intra aural canal A) dorsal view of the sloughed off cuticle of nymph B) ventral view of adult taken out from the nymphal cuticle C) capitulum of nymph and D) capitulum of adult used in the identification of species. Actual size of the tick is 0.5cm.

Prolonged attachment and ecdysis within the ear canal can increase the severity of damages caused by ticks. These could be perforation or rupture of the tympanum, suppurative otitis, luxation of the incudomalleal or incudostapedial joints, dislocation of the stapes from the oval window and/or bleeding from the ear canal. The continuous secretion of tick toxins may produce facial palsy. Tick bites also increase the risk of pathogen transmission to the human host, as *D. auratus* is known to carry many pathogens such as *Rickettsia sp.*, orbivirus and Omsk hemorrhagic fever virus and Kyasanur forest disease virus [4].

Pathogen transmission by ticks has not had much attention in Sri Lanka and *D. auratus*, has not been incriminated as a vector of disease before. However, given its potential to transmit diseases, it will be an interesting area for further studies, especially to understand its role as a vector of human diseases in Sri Lanka.

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S Ariyaratne¹, P R M P Dilrukshi³, P H Amarasinghe⁴, R S Rajakaruna²

¹Postgraduate Institute of Science, ²Department of Zoology, Faculty of Science, University of Peradeniya, Sri Lanka, ³National Science Foundation, 47/5 Maitland Road, Colombo 07, Sri Lanka, ⁴International Water Management Institute, C/o ICRISAT, Patancheru – 502, 324, Hyderabad, India.

Correspondence: RSR, e-mail: <rupikar@pdn.ac.lk>. Received 15 November 2010 and revised version accepted 24 March 2011. Competing interests: none declared.