

**Population Size, Plant Occupancy and Threats to *Acavus* in Three Selected Homegardens in Kandy District, Sri Lanka****Bandara A.M.R.S.\*, Ranawana K.B. and Weerakoon B.**

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**Abstract**

*Acavus* is an endemic genus of arboreal land snails, widely distributed in south west wet zone of Sri Lanka. *Acavus* consist of three species, *Acavus haemastoma*, *Acavus superbis* and *Acavus phoenix* with two subspecies *Acavus phoenix phoenix* and *Acavus phoenix custaneus*. Although *Acavus* is an endemic Gondwanan relict there are only few studies carried out on these snails, especially focusing homegardens. Homegardens serve as islands of habitats maintaining a considerable portion of *Acavus*. The objectives of the study are to estimate the population size of *Acavus*, to study the tree species commonly occupied by *Acavus* and to identify the threats to *Acavus* in homegardens in Kandy district. Study was carried out in three homegardens (each with about 60 perches) in Kahalla, Pilimathalawa and Gampola for six months from February to July 2013. All the sites harboured *Acavus phoenix custaneus*. Each site was visited twice a month and total count of *Acavus* and tree species they occupied were recorded. Threats to *Acavus* also observed in the field. Sites that were studied showed basic characters of Kandyan homegardens. According to the results, population sizes of *Acavus* of the sites are as follows, Kahalla 181, Pilimathalawa 40 and Gampola 117. Of the *Acavus* observed highest percentages were observed associated with following tree species, *Areca catechu* (24.29%), *Artocarpus heterophyllus* (15.91%), *Cocos nucifera* (12.78%), *Michelia champaca* (7.78%), *Persea Americana* (5.35%), *Musa* spp. (3.31%), *Coffea arabica* (2.87%), *Gliricidia sepium* (2.57%), *Caryota urens* (2.52) and *Artocarpus altilis* (1.92%). Rest of the *Acavus* observed was distributed in a variety of other tree and shrub species. In homegardens *Acavus* is threatened mainly by greater coucal (*Centropus sinensis*), occasionally by toque monkey (*Macaca sinica*), shrinking of homegardens (as they pass from generation to generation) and unawareness of public. It is clear that the presence of certain tree and shrub species supports the survival of *Acavus* in homegardens and sustainable use of such flora will help to maintain healthy *Acavus* populations.

**Keywords:** Population size, Homegarden, Endemic, Relict