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Range extension of *Xyleborus fornicatus* Eichh. (Coleoptera: Scolytidae), the shot-hole borer of tea in Sri Lanka: An emerging threat to tea plantations in the highlands

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The Shot-hole borer, *Xyleborus fornicatus* is one of the serious pests of tea causing serious damages in elevations between 200 to 1400m amsl. The damage is twofold viz. the primary damage occurs as a result of constructing galleries in the stems by the beetle, subsequently leading to yield loss. The secondary, but most damaging is the setting in of wood rot through the exposed galleries, which if unchecked, results in long term debilitation of the tea bush. There is a serious concern among growers that the pest is expanding its' range to areas previously free from infestation especially in the upper elevations.

A comparison of the historical records on the highest elevations where the pest was found during the period from 1950 to 2005 indicates that the pest had expanded its' active range by about 200m over a period of 50 years; a four meter expansion per year! A notable observation made was that high infestation levels in several plantations in high elevations (> 1300m), which have not been reported previously. Assessments were made on DT 1 and TRI 2025, two cultivars grown for its' ability to produce quality tea and for the yield potential respectively, in these areas. The results showed that high infestations viz. percent infested stems (Number of stems with galleries/Total number of stems sampled x 100), ranging from 60 – 100% and average number of galleries/stem (Total number of galleries in the sample/Total number of stems sampled), ranging from 2.7 – 6.6. It was also observed that the extents under these two cultivars in those selected plantations (Kotagala area of the Nuwara Eliya District) ranged from 48 – 78% of the total, which is also contributing to the problem. In the light of these observations it is clear that the plantations in the high elevations would suffer more damage in the future as a result of the range extension of this pest, associated with the impending change in the climate.

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