Netherlands Food and Consumer Product Safety Authority
Ministry of Economic Affairs

National Plant Protection Organization, the Netherlands

Quick scan number: QS.ENT.2014.13

	Quick scan date: 3 April 2015	
1	What is the scientific name (if possible up to species level + author, also include (sub)family and order) and English/common name of the organism? *Add picture of organism/damage if available and publication allowed*.	*Acrolophus sp*. Poey, 1832 (Lepidoptera, Acrolophidae). Common name: tubeworm moths; burrowing webworms. The genus comprises approximately 251 species (Roskov *et al.* 2014). The placement in a family is disputed: some authors consider Acrolophidae to be a subfamily of the Tineidae (Robinson *et al.* 2010).
2	What prompted this quick scan? *Organism detected in produce for import, export, in cultivation, nature, mentioned in publications, e.g. EPPO alert list, etc.*	The finding of three late instar caterpillars at import inspection of 10 plants of *Tillandsia xerographica* (Bromeliaceae) from Costa Rica, intended for further cultivation in a greenhouse on 19 November 2014. Specimens of the genus *Acrolophus* have been intercepted before by the NPPO of the Netherlands on *Tillandsia* from Central America in 1986 and 1987.
3	What is the current area of distribution?	America, from Canada to Argentina, including the West-Indies, most species are distributed in the Neotropics (Hasbrouck 1964).
4	What are the host plants?	Several species feed on roots and/or stems of the host plant especially grasses (including corn), bromeliads, orchids (Hasbrouck 1964), sugarcane (Busck 1913 *in* Davis 1990), cotton (Miner 1960) and strawberry (USDA 1937). Many other species are detritophagous or fungivorous (Davis 1990) and some are coprophagous (Stehr 2000) and are not known as plant pests.

5	Does the organism cause any kind of plant damage in the current area of distribution and/or does the consignment demonstrate damage suspected to have been caused by this organism? *Yes/no + plant species on which damage has been reported + short description of symptoms.* *Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary/pathogen vector, etc.).*	The larvae of several species of *Acrolophus* damage plants by feeding on the roots and stems. They create silken tubes in which they hide and from which they feed near the thatch line. Many species live in such tubes in the soil from where they feed on roots or at the plant base. Frank (2014) stripped the leaves from several large *Werauhia werckleana* (Bromeliaceae) on a fallen tree in Chiriquí, Panama, and found several large *Acrolophus* sp. larvae mining stems. At least one species is known of which the larvae live gregarious (Beutelspacher 1977). Species of *Acrolophus*, have been reported causing considerable damage in three fields of strawberries at Capeville, Virginia (USDA 1937) but more recent reports on damage in strawberry were not found. Miner (1960) reports an *Acrolophus* species destroying young plants of cotton (cutworm behaviour) and Banarjee (1967) reported damage in lawns caused by an *Acrolophus* species. The consignment on which the larvae were intercepted shows clear feeding damage mostly at the base of the plants, likely to have been caused by the up to 3 cm large larvae, but no recent reports of economic damage are known.
6	Assess the probability of establishment in the Netherlands (NL) (i.e. the suitability of the environment for establishment). a. In greenhouses (low, medium, high) b. Outdoors (low, medium, high) c. Otherwise (e.g. storage facilities, human environment)	Species of the genus *Acrolophus* are distributed over North, Central- en South-America. The probability of establishment in the Netherlands depends on the species involved. Because the specimens from the infested consignment could not be identified to species yet, it is not possible to assess the risk whether it can establish here.
7	Assess the probability of establishment in the EU (i.e. the suitability of the environment for establishment).	See #6.
8	What are the possible pathways that can contribute to spread of the organism after introduction? How rapid is the organism expected to spread (by natural dispersal and human activity)?	Specimens have been identified to the genus level only. Therefore, an appropriate assessment of the pathways and the potential rate of spread is not possible.
9	Provide an assessment of the type and amount of direct and indirect damage (e.g. lower quality, lower production, export restrictions, threat to biodiversity, etc.) likely to occur if the organism would become established in NL and the EU, respectively?	Given the damage shown in the consignments it is expected that the larvae found belong to an *Acrolophus* species that feeds on the stems/leaves of living plants like *Tillandsia* and possibly other Bromeliaceae. Apart from cosmetic damage the (relatively large) larvae may also 'cut' young plants by eating the base or the roots as is known from several species. Species whose larvae live in the soil, will be more difficult to control.

10	Has the organism been detected on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables)? *If "no", go to question 12*	No
11	If the organism has been found on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables), what is the probability of introduction (entry + establishment)? *Only to be answered in case of an interception or a find.*	-
12	Additional remarks	
13	References	• Banerjee AC (1967) Injury to grasses in lawns by *Acrolophus sp*. Journal of Economic Entomology, 60(4): 1174. • Beutelspacher CR (1977) Una nueva especie de *Acrolophus* Poey, 1832, de Chamela, Jalisco, México (Lepidoptera: Acrolophidae). • Davis DR (1990) Three new species of Acrolophus from the southeastern United States with remarks on the status of the family Acrolophidae (Lepidoptera: Tineoidea). Proceedings of the Entomological Society of Washington, 92(4): 694-704. • Frank H (2014) Bromeliad Biota: Lepidopterous larvae that eat bromeliads. http://entnemdept.ufl.edu/frank/bromeliadbiota/LEPIDBROM.HTM [acc. 24 Nov. 2014] • Hasbrouck F (1964) Moths of the family Acrolophidae in America north of Mexico (microlepidoptera). Proceedings USNM (114), 3475: 487-706. • Miner FD (1960) Cotton insects in Nicaragua. Journal of Economic Entomology, 53(2): 291-296. • Robinson GS, Ackery PR, Kitching IJ, Beccaloni GW, Hernández LM (2010) HOSTS - A Database of the World's Lepidopteran Hostplants. NHM, London. http://www.nhm.ac.uk/hosts [acc 24 Nov. 2014]. • Roskov Y, Kunze T, Orrell T, Abucay L, Paglinawan L, Culham A, Bailly N, Kirk P, Bourgoin T, Baillargeon G, Decock W, De Wever A, Didžiulis V (eds.) (2014) Species 2000 & ITIS Catalogue of Life, 2014 Annual Checklist. Digital resource at www.catalogueoflife.org/annual-checklist/2014. Species 2000: Naturalis, Leiden, the Netherlands. [acc. 24 Nov. 2014] • Stehr FW (2005) Immature Insects, vol. 1. Kendall Hunt Publishing. • USDA (1937) The more important records for April. Insect Pest survey Bulletin, 17(3): 69-110. http://archive.org/stream/insect1937no3/insect1937no3_djvu.txt
14	**Conclusions**	The present Quickscan was conducted after the interception of an unknown species of *Acrolophus* on plants of *Tillandsia* sp. from Costa Rica. The species intercepted probably feed on *Tillandsia* and possibly on other Bromeliaceae (plants of Bromeliaceae are not native to Europe). Little information is available on damage caused by Acrolophus spp. From literature, they are not known as important plant pests.
15	**Follow-up measures**	The consignment was released.