

# Pests and diseases associated with fruit and vegetables



Original thinking... applied

# Thrips

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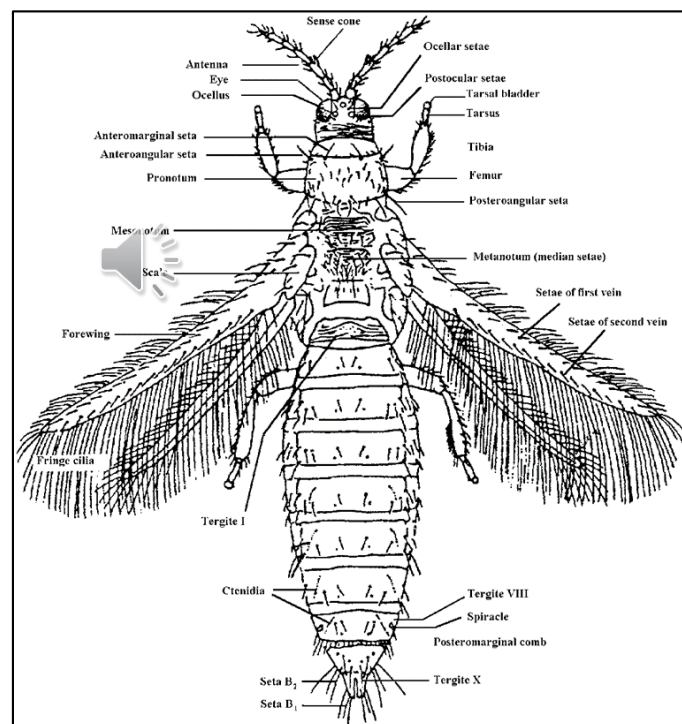
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## Thrips –Thysanoptera (= fringed-wing)

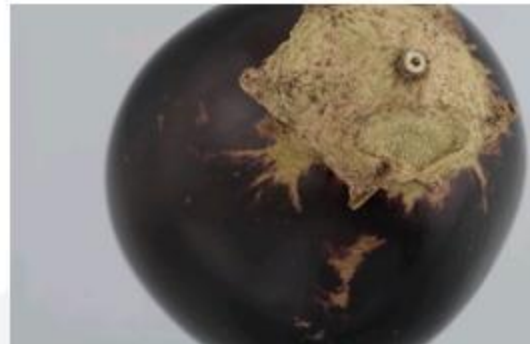
- Worldwide: c. 6000 species
- Mostly plant feeding
- British list contains 160 established/naturally occurring species
- 19 non-established incursions (including *Thrips palmi*, *Scirtothrips dorsalis*)
- PHSI interceptions of 52 other non-native species to date.
- Regulated species
  - *Thrips palmi*
  - *Scirtothrips dorsalis*, *S. aurantia*, *S. citri*



# Detection

Thrips feed by piercing and sucking

- Leaf silvering
- Deformity, growth malfunction in host
- Discoloration of upper leaf surface
- Look on the underside of the leaf
- In flowers, buds, leaf axils
- Hidden areas e.g. under clyces (calyx sing.)



# *Thrips palmi*

melon thrips; EU annex designation 1A1

- Polyphagous, 36+ families Solanaceae and Cucurbitaceae
- Populations build up rapidly
- Feed gregariously
- Scars and deformities on flowers, fruits and leaves
- Edibles: aubergines, basil, peppers and cucumbers
- Ornamentals: Chrysanthemums, Orchidaceae, Cyclamen, etc.
- Tospovirus vector of: Capsicum Chlorosis virus, Melon yellow spot virus and Tomato Spotted Wilt Virus



## Field recognition

Adult females c.1.3 mm (males 1.0 mm) – Wings may or may not reach the end of the abdomen

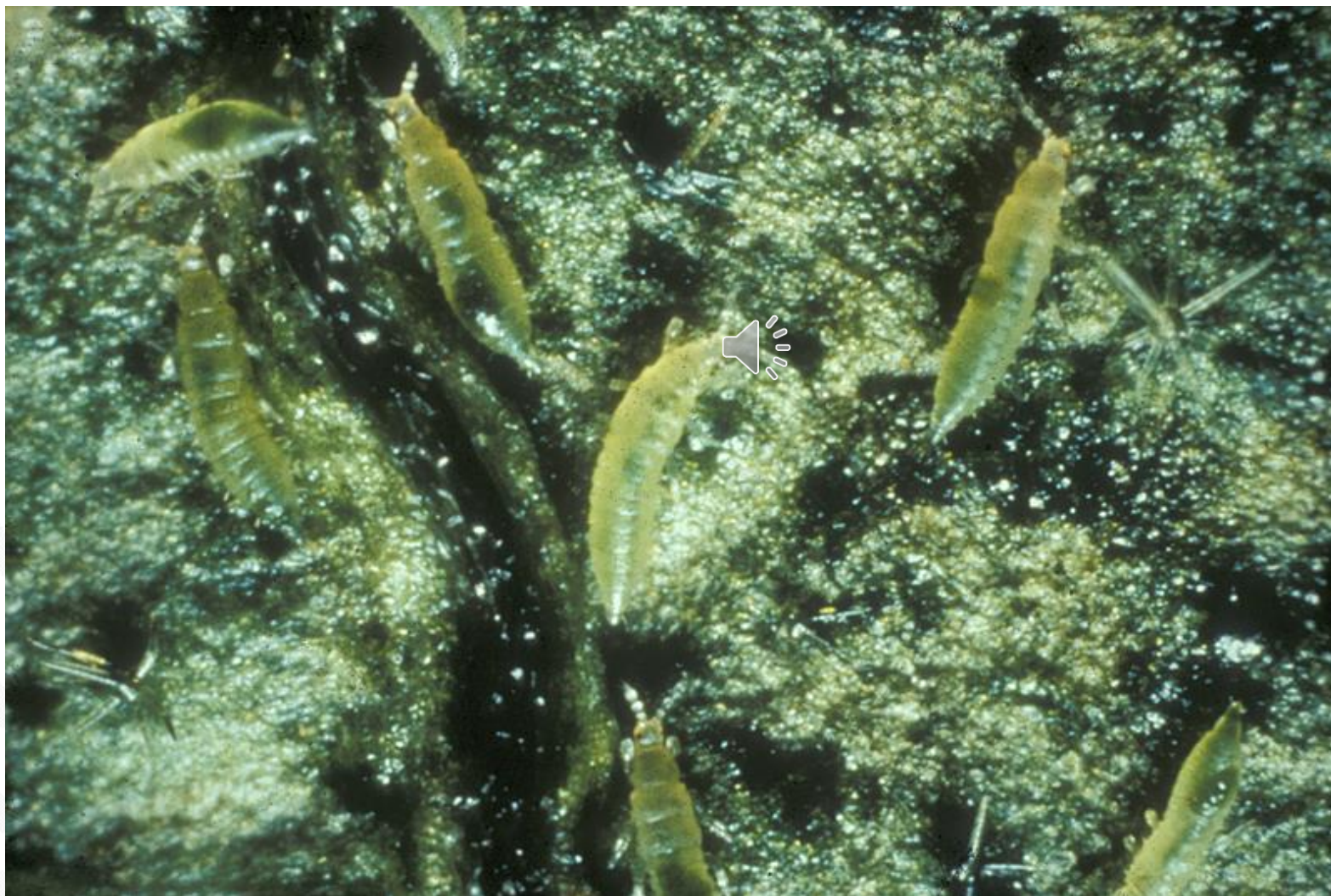
Yellow body with only furthest antennal segments darkened (may appear orange-tinged)

Possible to confuse with numerous other native and non-native species, particularly *Thrips flavus*

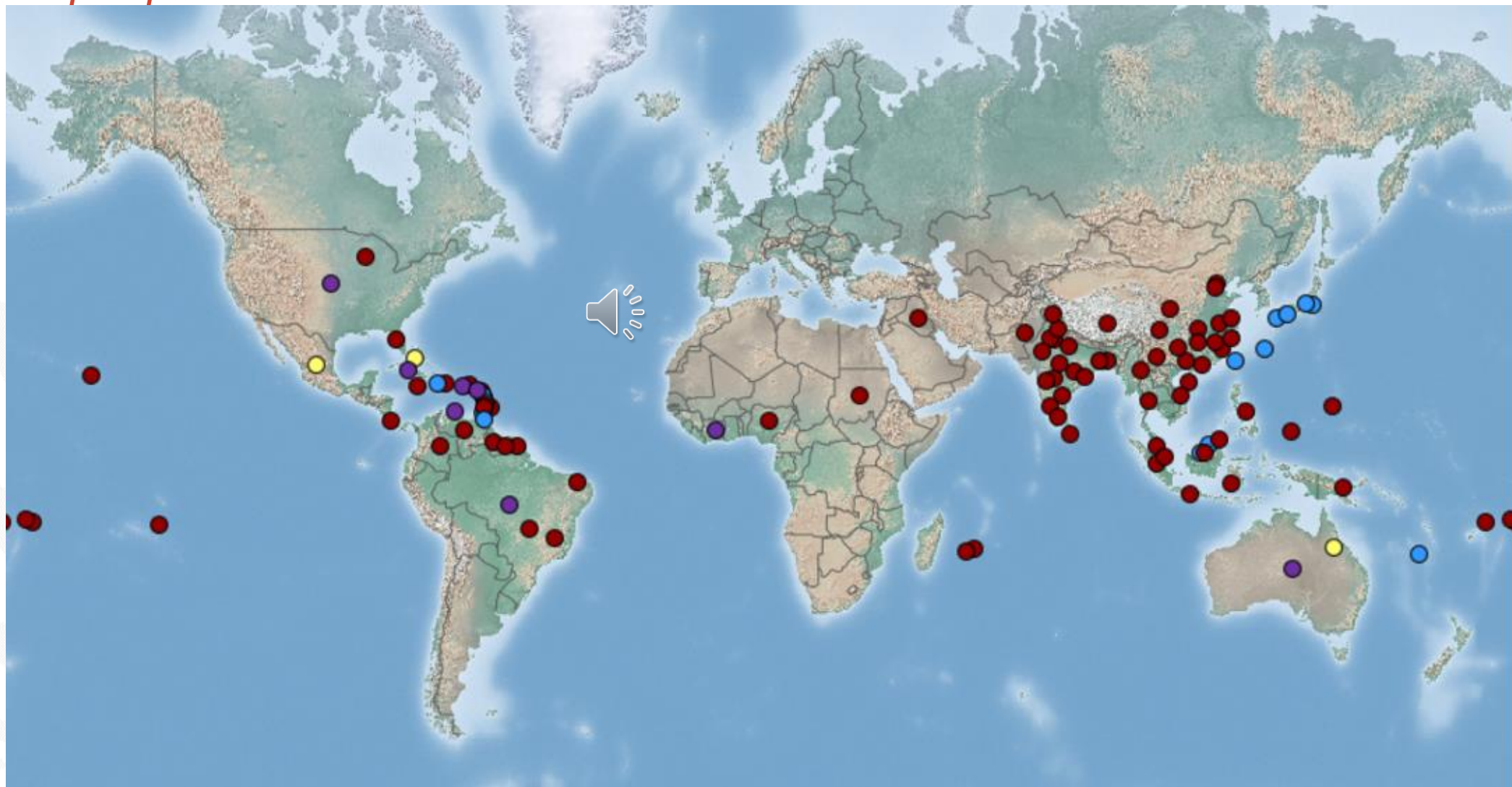
*S. aurantii*, *S. citri*, *S. dorsalis*, some *T. tabaci*, and males of many species including *F. occidentalis* are also all or mostly yellow thrips



# Immature stages



# *Thrips palmi* - distribution





# Interceptions

Nearly 600 confirmed interceptions 1996-date.

- Bitter-gourd (265) and Aubergine (97)
- Dominican Republic (126)
- Thailand (119).
- India (107)
- Ghana, Laos, Malaysia, Nigeria, Pakistan, Philippines, Sierra Leone, Sri Lanka & Vietnam
- Orchids from Thailand, Malaysia, Singapore (106)
- Chrysanthemum cuttings (108) mainly from Kenya, few from Brazil.



# *Scirtothrips spp.*

*S. aurantii*, *S. citri*, *S. dorsalis*



All are predominantly yellow thrips

All are prohibited on Citrus, Fortunella and Poncirus, but *S. aurantii* and, to an even greater extent, *S. dorsalis* are much more polyphagous with more than 100 other hosts recorded between them.

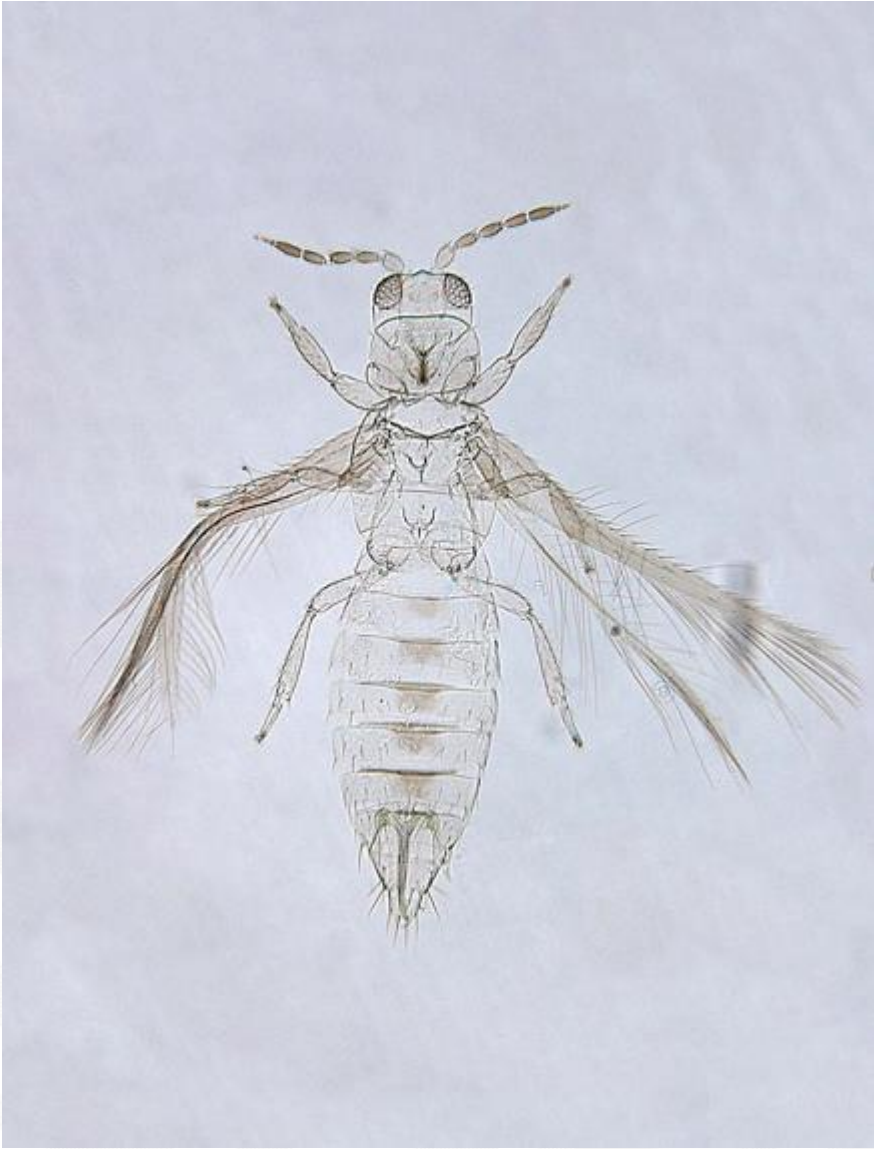
*S. aurantii*: intercepted twice, both ex. Kenya: in 2000 on *Lisianthus* (2♀); in 2013 on weed mixed with *Coriandrum* (1♀).

*S. citri*: 2 ♀ found at Kew gardens in 2008

*S. dorsalis* the most frequently intercepted



*Scirtothrips dorsalis* – chilli thrips



# *Scirtothrips dorsalis*

Originally from SE Asia

During the past two decades it has been expanding its range  
- now present in Florida, the Caribbean, Israel, Kenya, West Africa, South Africa

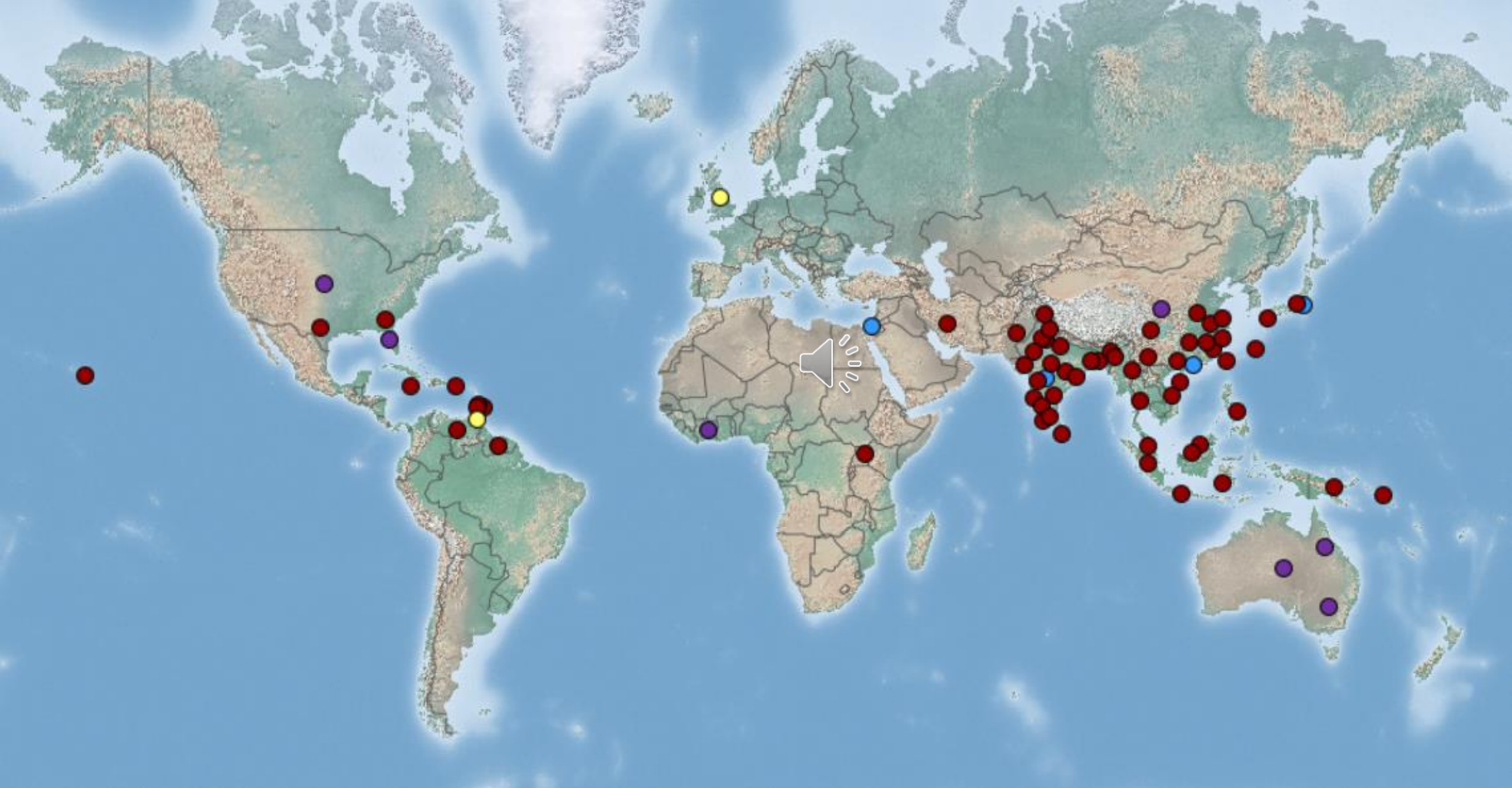
Now often intercepted by PHSI, @ 180 records since 1999

Most frequently encountered on Momordica fruit from Kenya (73).

Also intercepted from Cayman Island, Ghana, India, Pakistan, Sri Lanka, Thailand and USA.



# Scirtothrips dorsalis - distribution



# *Thrips palmi* & *Scirtothrips dorsalis*

