

TAXUS MEALYBUG: *Dysmicoccus wistariae* (Green)
Order - Homoptera; Family – Pseudococcidae

DISTRIBUTION - *D. wistariae* is found in the northeastern and Midwestern sections of the United States. It ranges from Maine to Maryland, and west to Missouri. It is apparently an introduced species.

DESCRIPTION - Adult females are about 4 millimeters in length and 2 - 2.5 millimeters in width. They are covered by a white wax, except on the dorsum, where four naked areas allow the red body pigments to show through as longitudinal lines. The margin of the body is adorned with 15 - 17 pairs of waxy filaments; the posterior pair is the longest and about one-fourth the length of the body. A small, filamentous ovisac is sometimes constructed beneath the posterior part of the abdomen. The body fluid is dark red.

HOSTS - *D. wistariae* infests all species of *Taxus*, but it is usually found more abundant on those species with dense foliage. It has also been found on maple, *Rhododendron*, dogwood, and *Prunus* species.

DAMAGE - Mealybugs may become so abundant that they cover the trunk and the principal branches of a plant, and occur in masses where the twigs branch. Their feeding on the branches causes the plant to decline. In heavy infestations the infested sites of the plant are white and distinctly noticeable. Infested plants tend to have sparse yellow foliage and a stunted, darkened appearance due to the presence of sooty mold growing in the honeydew exuded by the mealybugs.

LIFE CYCLE: (northern Illinois) - *D. wistariae* passes the winter in the first instar, in the crevices of the bark or beneath the waxy secretions left by the adult female (late September through early April). As the weather warms during the spring, the nymphs move out of their overwintering sites to begin feeding on the twigs. These nymphs develop rather quickly and by early June, they have matured to adult females which are beginning to develop eggs. By late June, the eggs begin to hatch inside the adult female body, and she produces living young. The adult stage is present virtually all summer long from early June through late September; and it becomes extremely difficult to find a live adult by fall. There may be anywhere from 1 - 3 generations per year.

INSPECTION TIPS - Any *Taxus* species may be infested. Since *D. wistariae* gives birth to living young, there are no egg mass debris.

From late September through early April - look with a hand lens for overwintering nymphs along the main branches, in the creases of the bark, and under the bark flakes.

From early April through May - the nymphs are feeding and developing. They may be found anywhere on the plant, from the bark surfaces, to the needle foliage. They are primarily present on the small twigs and needle foliage. By early June, most of the nymphs have developed into adult females, with eggs being produced within the female.

From late June through late September - both adult females and viviparous nymphs may be found anywhere on the plant.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
[---Nymphs Overwinter----]											
[---Nymphs Feed--]											
[---Adult Females Have Young--]											
[-----Nympha Overwinter-----]											
Observed at: Northern Illinois						General Rule: +/- 1 week for each 60 miles change in Latitude					

CONTROL TIPS - Control results are strictly dependent upon adequate spray coverage. The insecticide must reach the bark surface of the infested plant.

Treatments are most effective when applied during the spring (late April through mid-May) while the overwintered nymphs are feeding and developing. This time coincides when Bridal wreath spiraea (*Spiraea vanhouttei*) is in bloom. During this time it is possible to attain significant control results with only one treatment.

By late June, both adult females and emerging nymphs are present. Treatments will control the emerging nymphs, but will have little impact on the adult females, which are protected by their white, waxy secretions. Therefore, from late June through late September, control results can be somewhat effective, but will also be incomplete.

It is also possible to attain significant control results during the fall (late September through October). However, as the cold weather approaches, the nymphs are protected under the bark scales of the plant.

RELATED SPECIES - It is important to recognize that there are a few different mealybug species, that may infest *Taxus* (Japanese yew) plants.

- *Dysmicoccus wistariae* (Green)
viviparous method of reproduction
overwinters as a nymph under the bark scales
old name was *Pseudococcus cuspidatae* Rau
- *Pseudococcus comstocki* (Kuwana)
oviparous method of reproduction
overwinters as an egg within the ovisac
- *Pseudococcus maritimus* (Ehrhorn)
oviparous method of reproduction
overwinters as a nymph under the "old" egg mass debris
- *Pseudococcus obscurus* (Essig)
oviparous method of reproduction
overwinters as a nymph under the "old" egg mass debris

REFERENCES –

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PHOTOGRAPHS -

Adults --- (Right & Facing Page)
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