

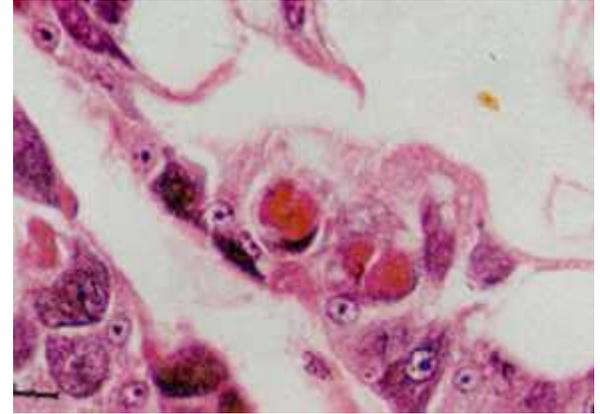


## Penaeus monodon-type Baculovirus

### PmSNPV, Penaeus monodon-type baculovirus (MBV), MBV disease

#### Threat scores

1. Ecological impact
  - “Disease risk posed by MBV to native shrimp stocks of the Gulf of Mexico is unknown. Gross signs of PmSNPV include decreased feeding & growth rates, & increase gill & surface fouling by epibionts. In severe cases larvae & postlarvae may have white midgets” (Molnar 2008). Since this viral species infects a commercially important shrimp, attention to it is warranted.
  - Susceptible species include: *Penaeus monodon*, *Fenneropenaeus merguensis*, *Melicertus plegejus*, *Metapenaeus ensis*, *P. esculentus*, *P. semisulcatus*, *F. penicillatus*, and *Melicertus kerathurus*
2. Invasive potential
  - Found in wild and cultured populations of shrimp in South Carolina and Texas
3. Geographic extent
  - Locally pervasive
4. Management difficulty
  - “Implement strict biosecurity measures including histological exam of all incoming stock. The severity of infections seems to decrease after PL-25. With good management procedures, shrimp infected with MBV (even with severe infections) can survive” (Molnar 2008).



#### Geography and Habitat

1. Origin: PmSNPV refers to: Pm = *P. monodon* the first species in which the virus was described, SNPV = singly enveloped nuclear polyhedrosis virus (Molnar 2008).
2. Late 1980's - early 1990's
3. Common pathogen of cultured & wild *P. monodon* throughout much of the species natural range in east Asia & Indo-Pacific region.
4. Marine, aquaculture, estuaries/bays, water courses
5. Host *Penaeus monodon* found in shallow estuarine waters sporadically entering rivers, with adults usually found in deeper waters (Molnar 2008).

#### Invasion Pathways

1. Aquaculture and Mariculture Activities
  - Accidental known
  - Cause- Pathogen of aquacultured species.
  - Common pathogen of cultured & wild *P. monodon* throughout much of the species natural range in east Asia & Indo-Pacific region (Molnar 2008).

#### Non native locations

1. 42- Carolinian
2. 43- Northern Gulf of Mexico
3. 64- Eastern Caribbean
4. 152- Hawaiian Islands

## Sources

1. Molnar, Jennifer, et al. 2008. "Assessing the global threat of invasive species to marine biodiversity." *Frontiers in Ecology and the Environment*. 6 (9), pp. 485-492.
2. <http://conserveonline.org/workspaces/global.invasive.assessment>
3. <http://www.niobioinformatics.in/prawns/Gif/DISEASE/MBV1.GIF>