



Composting Worms for Hawaii

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Perionyx excavatus

Blue worm, India blue worm, Malaysian blue worm, traveling worm

Origin

Perionyx excavatus (Perrier 1872) is found over large areas of tropical Asia, including India, Malaysia, the Philippines, and Australia. It is also found in parts of South America, in Puerto Rico, and in some areas of the United States (south of the Mason Dixon line and in the Gulf Coast region). Naturalized populations of *P. excavatus* have been identified in Hawaii; how long it has been here is not known.

Description

Perionyx excavatus is a small earthworm 1¼–2¾ inches long. Its front part is deep purple and its hind part is dark red or brown. It has an iridescent, blue-violet sheen on its skin that is visible in bright light. These worms are highly active and twitch when disturbed. The clitellum (“collar”) of a mature blue worm begins approximately 12 segments from its mouth and covers 6 segments.

Environment

Blue worm is adapted to the subtropics and tropics, tolerating a temperature range of 45–90°F, although 70–80°F may be best for its growth. It is very efficient in breaking down organic wastes in vermiculture systems.

Life cycle

The worm's growth stages are cocoon, immature worm, and adult. Earthworms are hermaphrodites, having both male and female reproductive organs. The worms release tiny, lemon-shaped cocoons after mating. Each

cocoon contains several fertilized eggs, which hatch in 2–3 weeks under suitable conditions. Reproductive rates vary according to the temperature and environmental conditions, which in vermiculture depend on the maintenance of the composting system. Under favorable conditions, blue worms may each produce about 20 offspring per week, which in turn will take 3–5 weeks to reach sexual maturity.

Uses

Blue worm is an excellent composting worm and a prolific breeder given proper nutrient sources and maintenance of its environment, particularly in tropical and subtropical locations.



Amyntas gracilis

Alabama jumper, Georgia jumper

Origin

Amyntas gracilis (Kinberg 1867) is a large worm found in many areas of tropical Asia. Naturalized populations of *A. gracilis* have been observed in Hawaii, and they were originally misidentified as *Amyntas hawayanus* or *Pheretima hawayana*. How long this worm has been here is not known.

Description

Amyntas gracilis is a large, soil-dwelling earthworm 4–6 inches long. It has pink to brown pigmentation and an iridescent, multi-colored sheen on its skin that is visible in bright light.

Environment

A. gracilis is a tropical earthworm species. It lives in soil but also consumes decaying organic matter. It tolerates handling well and is used in vermicomposting systems in Malaysia, the Philippines, and the United States. Temperature range, 45–90°F; preferred, 70–80°F.

Life cycle

Growth stages: cocoon, immature worm, adult. Earthworms are hermaphrodites, having both male and female reproductive organs. Worms release small, lemon-shaped cocoons after mating. Each cocoon contains one or two fertilized eggs. Reproductive rates are undetermined for *A. gracilis*, although it is believed that fertilized eggs hatch in 15–30 days under ideal conditions, with as many as seven young hatched per worm per week. Time to sexual maturity is also undetermined, although it is believed to be 30–95 days under ideal conditions.

Uses

Amyntas gracilis is a large earthworm that is easily cultured, making it well suited for use as bait. It has also proved to be an effective composting worm in tropical and subtropical locations.



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