ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Invertebrate Abstract **Element Code:** IILEY11120
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Ianassa wagneri*
COMMON NAME: A Notodontid Moth

SYNONYMS: *Oligocentria* sp. 1
OTHER COMMON NAMES:
FAMILY: Notodontidae

AUTHOR, PLACE OF PUBLICATION: Miller, James S., David L. Wagner, Paul A. Opler, and J. Donald Lafontaine. 2021. Noctuoidea, Notodontidae (Part 2, conclusion): Heterocampinae, Nystaleinae, Dioptinae, Dicranurinae. *In:* Lafontaine J.D. et al. (Ed). The Moths of North America, Fascicle 22.1B. The Wedge Entomological Research Foundation, Washington. 443 pages.

TYPE LOCALITY: Miller Canyon, 5,000', Huachuca Mountains, Cochise Co., Arizona

TYPE SPECIMEN: CUIC. J. G. Franclemont. 1974-07-15.

TAXONOMIC UNIQUENESS: Formerly *Oligocentria* sp. 1 (name used before it was described). Described as *Ianassa wagneri* (Miller et al. 2021). There are nine species in the genus *Ianassa* (Pohl and Nanz 2023) with six of them occurring in Arizona (Miller et al. 2021).

DESCRIPTION: *Ianassa wagneri* has a relatively large body size and dramatic appearance with a unique forewing pattern of which the outer third of the forewing has larger and bolder streaks and dashes than other members of its genus, making this species easily distinguishable from other Notodontidae and members of the genus (Miller et al. 2021). Wide white streaks beyond the discal cell of the forewing are shaded pink. Male forewing length is 20.5–23.0 cm, while female forewings are 23.0–26.0 cm in length. The genitalia on both male and females display exaggerated features like huge, antler-shaped socii and corrugated antevaginal plates (Miller et al. 2021). Synapomorphic to the genus, male *I. wagneri* have a two-parted Tg8 with strongly curled posterolateral processes, often with ribbon-like invaginations unique to this species (Miller et al. 2021). Also unique to the *I. wagneri* is their whitish brown collar with a

blackish brown central area near the midline that adults in this species display in contrast to the brownish gray central area of most *Ianassa* species (Miller et al. 2021). Fully grown *I. wagneri* larvae reach a length of 3.5 cm (Miller et al. 2021). Most larvae in this family are striped (Borror and White 1970).

AIDS TO IDENTIFICATION: Larvae have two MD setae above the spiracle on abdominal segments, as opposed to other noctuoids, which have only one (Resh and Carde 2003). Larvae also have distinguishing brown spots surrounding the head's primary setal bases. In adults, the outer third of the forewing has larger and bolder streaks and dashes than other members of its genus. Anterior to the base of each forewing is a small blackish lateral spot. The collar of adult *Ianassa wagneri* is whitish brown with a blackish brown central area near the midline in contrast to the brownish gray central area of most *Ianassa* species (Miller et al. 2021).

ILLUSTRATIONS:

Color photographs of adults (Miller et al. 2021, Plate A-18, Figures 5–7)
Monochrome photo of male genitalia (Miller et al. 2021, Plate 60, Figure 6)
Monochrome photo of male tergum (Miller et al. 2021, Plate 74, Figure 4a)
Monochrome photo of male sternum (Miller et al. 2021, Plate 74, Figure 4b)
Monochrome photo of female genitalis (Miller et al. 2021, Plate 88, Figure 2)
Color photos of larvae (Miller et al. 2021, Plate L-19, Figures 5–6)
Color photographs (Moth Photographers Group 2024).

TOTAL RANGE: This species ranges from Santa Cruz and Cochise Counties in southeastern Arizona, and south along the western side of Sierra Madre Occidentale to at least Chihuahua, Mexico. It is likely to also occur in the mountains of extreme southwestern New Mexico (Miller et al. 2021).

RANGE WITHIN ARIZONA: This species occurs in Santa Cruz and Cochise Counties in southeastern Arizona, in the foothills and canyons of the Atasco, Huachuca, Patagonia, and Peloncillo Mountains (Miller et al. 2021).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Non-migrant. Nodontid moth larvae are usually gregarious, and when larvae feel threatened, they will freeze with the ends of their bodies lifted (Borror and White 1970).

REPRODUCTION: The principal flight of adults extends from July into the first half of August. Whether a second small facultative brood occurs in years with an extended monsoon is unknown (Miller et al. 2021).

Order Lepidoptera: Segmental appendages of the abdomen are absent except for vestiges that may form parts of the genitalia. The genitalia of both sexes are often complex and bear characteristic spines, teeth, setae, and scale tufts (Resh & Cardé 2003). These structures are important in complex courtships and matings, preventing hybridization between unsuitable males and females. During copulation in males, a median, tubular organ (the aedeagus) is extended through an eversible sheath (vesica) to inseminate the female (Resh & Cardé 2003). The female genitalia exhibit a number of different patterns of the internal ducts and the openings, varying from a condition in which there are no special genital openings, insemination and egg laying taking place through a single aperture, shared with the excretory system, to one in which there are two specialized openings, one for insemination and one for oviposition, both distinct from the anus (Resh & Cardé 2003). Female prominents, in the family Notodontidae, lay their eggs on the leaves of host plants (McGavin 2002).

The testes of the male are paired in primitive lepidopterans but fused into a single organ in advanced forms. In both cases, the sperm ducts are paired (Preston-Mafham 1993). As in other insects, the sperm pass from the testes down paired ducts for storage in sacs called seminal vesicles (Preston-Mafham 1993). The female reproductive system consists of paired ovaries, paired accessory glands that provide the yolks and shells of the eggs, and a system of receptacles and ducts for receiving, conducting, and storing sperm (Preston-Mafham 1993). The individual oviducts join to form a common oviduct that leads to the vagina. In copulation, the male deposits a sperm capsule (spermatophore) in a receptacle (bursa copulatrix) of the female. The spermatophore releases the sperm, which swim into the oviduct and thence to the seminal receptacle (bulla seminalis) where they are stored until egg laying, which may be hours, days, or months after mating (Preston-Mafham 1993).

FOOD HABITS: The larvae are likely oak (*Quercus*) specialists (Miller et al. 2021). Prominent caterpillars eat foliage and feed in groups to protect themselves from predatory attacks (McGavon 2002). Adults are nonfeeding.

HABITAT: Rich oak/juniper woodland in combination with many other woody and herbaceous plants (NatureServe 2025).

ELEVATION: 4,000–6,500 ft (1,219–1,981 m) (Miller et al. 2021).

PLANT COMMUNITY: Madrean Evergreen Woodland, Semidesert Grassland

POPULATION TRENDS:

SPECIES PROTECTION AND CONSERVATION

Status definitions: https://bit.ly/hdms-status-definitions
Heritage Network Conservation Status Rank definitions: https://bit.ly/hdms-rank-definitions

ENDANGERED SPECIES ACT STATUS:
STATE STATUS:
HERITAGE NETWORK STATUS: GNR
SNR
OTHER STATUS:

MANAGEMENT FACTORS: Small range, development, clearing on private lands, fires, and lack of management considerations are factors that could affect this species (NatureServe 2025).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS: Life history, population status, and population range studies need to be performed.

LAND MANAGEMENT/OWNERSHIP:
USFS - Coronado National Forest
Private

SOURCES OF FURTHER INFORMATION

REFERENCES:

Borror, David J. and Richard E. White. 1970. Insects: Peterson field guide. Houghton Mifflin Company. Boston, Massachusetts. Pp: 234.

McGavin, George C. 2002. Smithsonian handbooks insects spiders and other terrestrial arthropods. New York, New York. Pp: 166.

Miller, James S., David L. Wagner, Paul A. Opler, and J. Donald Lafontaine. 2021. Noctuoidea, Notodontidae (Part 2, conclusion): Heterocampinae, Nystaleinae, Dioptinae, Dicranurinae. *In:* Lafontaine J.D. et al. (Ed). The Moths of North America, Fascicle 22.1B. The Wedge Entomological Research Foundation, Washington. 443 pages.

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NatureServe. 2025. NatureServe Explorer: An online encyclopedia of life [web application]. NatureServe, Arlington, Virginia, USA. Available: https://explorer.natureserve.org/. [Accessed 2025-04-15].

Pohl, Gregory R. and Stephen R. Nanz. 2023. Annotated taxonomic checklist of the Lepidoptera of North America, north of Mexico. Wedge Entomological Research Foundation, Bakersfield, California. xiv + 580 pages.

Preston-Mafham, Rod and Ken Preston-Mafham. 1993. The encyclopedia of land invertebrate behaviour. MIT Press, Cambridge, Massachusetts. 320 pages.

Resh, Vincent H. and Ring T. Carde. 2003. Encyclopedia of insects. Academic Press. New York, New York. Pp: 658-659.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

Any moth of the family Notodontidae (a notodontian) is considered a "Prominent moth", so called tufts of scales stick up prominently from the rear margins of the forewings when folded in some species (McGavin 2002). Notodontidae comes from *not*, meaning back, and *odont,* meaning tooth.

The species epithet pays tribute to David Wagner who was the first to document larval stages for *I. wagneri* (Miller et al. 2021).

Revised: 2005-10-30 (AMS)
2025-05-04 (KCM)