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Marasmius vagus (the Wandering Creamsicle), One of Florida's Most Common Lawn Mushrooms[1]

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Abstract

Marasmius vagus (the wandering creamsicle, wandering parachute, or wandering *Marasmius*) is one of the most common lawn mushrooms in the state of Florida. These small but conspicuous mushrooms often attract attention because of their bright-orange caps and tendency to grow in clusters, arcs, and rings in suburban lawns. *Marasmius vagus* is native to northern Australia. Mycologists believe that this species was recently introduced to Florida. This fungus is likely saprotrophic (i.e., living on dead or decaying plant matter) but may also be endophytic (i.e., living undetected inside the healthy leaves or roots of plants). *Marasmius vagus* is not toxic to humans or animals and is not considered harmful to the landscape. The purpose of this publication is to introduce Floridians to this mushroom, provide basic information about its biology, and aid in identification.

Introduction

Marasmius vagus F.E. Guard, M.D. Barrett & Farid is one of more than 500 species in the genus *Marasmius*. The genus name comes from the Greek *marasmos*, which means "drying out." Many *Marasmius* species have the unusual ability to dry out and then revive with moisture. Members of the genus *Marasmius* are gilled mushrooms that produce white spores and have a central stipe (also known as a stem or stalk) that is often tough or wiry.

The name *Marasmius vagus* was published in 2020 by Frances Guard and collaborators (Crous et al. 2020). The description of this mushroom species used collections from savanna grassland habitats in Queensland and the Northern Territories in Australia, as well as specimens from suburban lawns in Florida in the United States. The species epithet *vagus* comes from the Latin for "wandering" (related words include vagabond, vagrant, and vague), reflecting its apparent expanding range and its ability to adapt and thrive in various habitats (Crous et al. 2020). Recently proposed common names include the wandering creamsicle, wandering parachute (Audubon National Audubon Society 2023), and wandering *Marasmius*. The current classification of *Marasmius vagus* is kingdom Fungi, phylum Basidiomycota, class Agaricomycetes, order Agaricales, and family Marasmiaceae.

Morphology

The mushrooms of *Marasmius vagus* have caps that range in color from apricot to pale orange (Figure 1). The cap coloration is affected by environmental conditions: the orange shade intensifies in dry weather and fades in wet weather. The small mushroom caps are 12 to 20 millimeters in diameter and smooth to the touch. The caps are initially dome-shaped, but they later become flat as they age. Underneath the cap are white gills that are unattached or barely attached to the stipe. Mature specimens may have

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shallow connections between the gills. The stipes are 30 to 60 millimeters long and 3 to 5 millimeters thick, attached to the bottom of the cap in the center, cartilaginous in texture, and white to cream in color. A tuft of white mycelium (appearing as fine fuzzy filaments) may be present at the base of the stipe. This mushroom's odor and taste are not distinctive.

Marasmius vagus has a white spore print. A spore print can be obtained by removing the stipe, placing the cap of the mushroom on a piece of paper or aluminum foil, and then covering it overnight with a jar or bowl. These spores are reproductive cells produced on the gills underneath the cap. Once they are mature, the spores are then ejected into the air. Occasionally, one may be able to observe spore deposits left by mature mushrooms on the caps of shorter mushrooms or blades of grass.

Ecology, Range, and Habitat

The mushrooms of *Marasmius vagus* typically grow in clusters or groups, although they sometimes form semi-circles or rings. *Marasmius vagus* is most common during warm, wet weather. In Florida, this species is commonly found during wet periods of spring, summer, and fall (April through November). Like other species in the genus *Marasmius*, *M. vagus* is believed to be a saprotroph that obtains nutrients from decaying plant material (Arora 1986). However, some *Marasmius* species can also exist as endophytes that live undetected inside healthy tissues of living plants (Li et al. 2018; Orlandelli et al. 2012). Some experts speculate that *Marasmius vagus* is an endophyte, but additional research is necessary to determine the complete life cycle and to discover whether this fungus can live inside of plants.

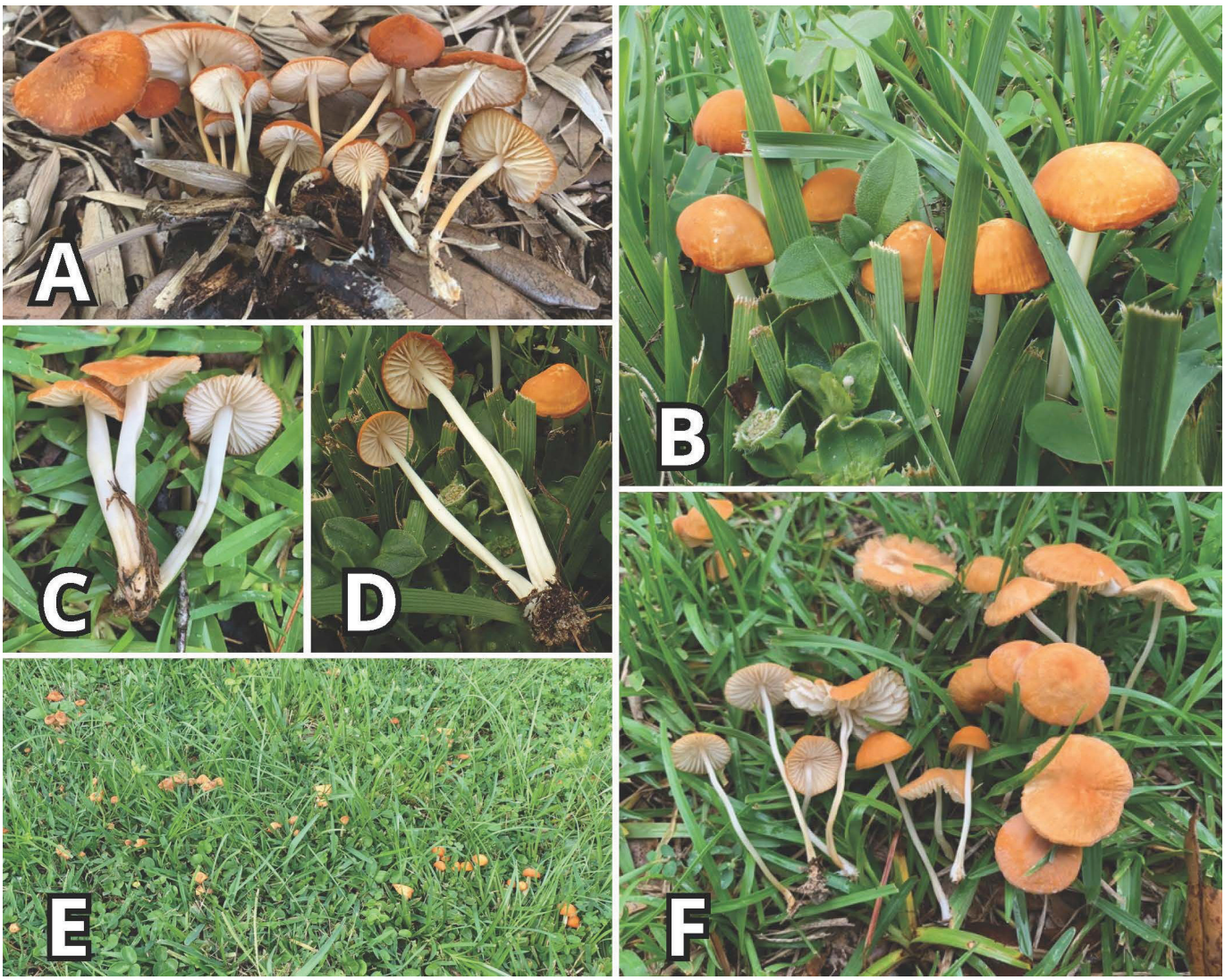

Figure 1. Morphology of *Marasmius vagus* (A–F). Photos of fresh specimens highlight the vibrant orange cap coloration, the bright white stipe, and the white, closely-spaced gills. Mushrooms of *Marasmius vagus* typically grow in clusters and may sometimes form large congregations or partial fairy rings (as shown in E).
Credits: Sarah Prentice (B, C, D, E) and Matthew Smith (A, F)

Marasmius vagus is believed to have been introduced from Australia and established in Florida in recent years. This species was never documented by the prolific 20th-century Florida fungal biologists William Murrill (1859–1957) and James Kimbrough (1934–2017). However, it has now become one of the most encountered species in the state based on anecdotal observations (Smith and Prentice, personal observations) as well as observation records on iNaturalist (iNaturalist.org). This species was first recorded in Florida in August 2012 in Davenport (Polk County) on the citizen-science website MushroomObserver.org. Later collections obtained from state residents via UF/IFAS Extension in 2015–2017 helped contribute to the original description of this species (Crous et al. 2020).

In its native northern Australia, *Marasmius vagus* grows on fallen leaf litter in a variety of undisturbed natural habitats, including grasslands, tropical savannas, and rainforests (Crous et al. 2020). However, as an introduced species in Florida, it is typically observed in lawns and adjacent disturbed environments. Given that *Marasmius vagus* is a tropical to subtropical species, the warming climate may facilitate the range expansion of this mushroom in the future.

The mushrooms of *Marasmius vagus* are only the sexual reproductive structures; they do not constitute the entire fungus. The "body" of the fungus is comprised of hyphae (microscopic filaments) that live inside of soil and leaf litter (and possibly within live grasses). Therefore, removal of the mushrooms from a lawn where *Marasmius vagus* is present will temporarily reduce fruiting, but the fungus is likely to produce new mushrooms in the future. There is no currently known method to remove or reduce the fruiting of this mushroom. Importantly, *Marasmius vagus* is not known to cause disease, infection, or rot of living plants, so it is not harmful to your lawn or landscape.

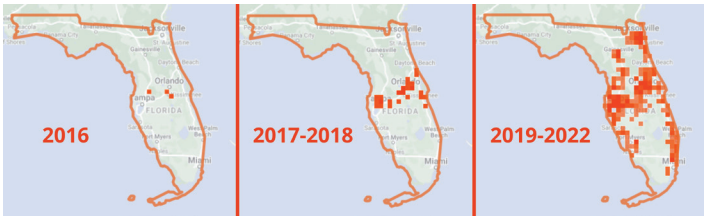

Figure 2. Maps of Florida depict the expanding range of *Marasmius vagus* since its discovery in Florida in 2016. Distribution data were obtained from iNaturalist and document range expansion to the north and south, as well as the steadily increasing number of observations of *Marasmius vagus* in 2016 (left), 2017–2018 (middle), and 2019–2022 (right).
Credits: Sarah Prentice

Toxicity

Marasmius vagus is not known to be toxic or harmful to humans or animals. Prior to widespread knowledge of *Marasmius vagus* in Florida, it had been misidentified as *Marasmius oreades* and subsequently consumed without adverse effect. Nevertheless, *Marasmius vagus* is not considered a choice edible mushroom **and could be confused with other fungi that are toxic to people and pets**. Members of the public should never consume wild mushrooms. If you have a question about an ingested fungus in the state of Florida and need help, contact the American Association of Poison Control Centers hotline (800-222-1222) or Dr. Matthew E. Smith (352-273-2837, trufflesmith@ufl.edu).

References

Arora, D. 1986. *Mushrooms Demystified: A Comprehensive Guide to the Fleshy Fungi*. Berkeley: Ten Speed Press. 959.

Bessette, A. E., A. R. Bessette, and M. Hopping. 2023. *A Field Guide to the Mushrooms of Georgia*. Athens: University of Georgia Press. 672.

Crous, P. W., M. J. Wingfield, Y. H. Chooi, C. L. M. Gilchrist, E. Lacey, J. I. Pitt, F. Roets, et al. 2020. "Fungal Planet Description Sheets: 1042–1111." *Persoonia* 44:301–459. https://doi.org/10.3767/persoonia.2020.44.11

Guard, F. E., M. D. Barrett, A. Farid, M. E. Smith, and T. Lebel. 2020. "Validation of Two Fungal Names in *Marasmius* Fr. (Marasmiaceae)." *Swainsona* 33:111–112.

Kirk, P. M., P. F. Cannon, D. W. Minter, and J. A. Stalpers. 2008. *Dictionary of the Fungi* (10th Edition). 771. Wallingford, UK: CABI.

Li, X., J. Wang, S. Zhang, H. Wang, X. Li, X. Li, and H. Zhang. 2018. "Distribution of Fungal Endophytes in Roots of *Stipa krylovii* across Six Vegetation Types in Grassland of Northern China." *Fungal Ecology* 31:47–53. https://doi.org/10.1016/j.funeco.2017.11.001

National Audubon Society. 2023. *National Audubon Society Mushrooms of North America: The Complete Identification Reference to Mushrooms—with Full-Color Photographs; Detailed Descriptions of Cup, Stem, Flesh, and Spore Print; and Authoritative Notes on Growth Characteristics, Habitat, and Conservation Status*. First Edition. Edited by Jim Cirigliano. National Audubon Society Field Guides. New York: Alfred A. Knopf, a division of Penguin Random House LLC.

Orlandelli, R. C., R. N. Alberto, C. J. Rubin Filho, and J. A. Pamphile. 2012. "Diversity of Endophytic Fungal Community Associated with *Piper hispidum* (Piperaceae) Leaves." *Genet. Mol. Res.* 11 (2): 1575–1585. http://dx.doi.org/10.4238/2012.May.22.7