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ORIGINAL PAPER

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Running title: New Chytrid Parasite of *Microglena*

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Chytrids are early diverging lineages of true fungi that reproduce with posteriorly uniflagellate zoospores. In aquatic ecosystems, parasitic chytrids of algae have important ecological roles by influencing the population dynamics of phytoplankton and transferring nutrients and energy from inedible algae to zooplankton via zoospores. Despite their ecological importance, information on parasitic chytrids is lacking in the current systematics of chytrids. Here, we investigated a novel chytrid culture KS100 that parasitizes the green alga, *Microglena coccifera* (Volvocales). A cross-inoculation experiment revealed that KS100 infection was specific to the genus *Microglena*.