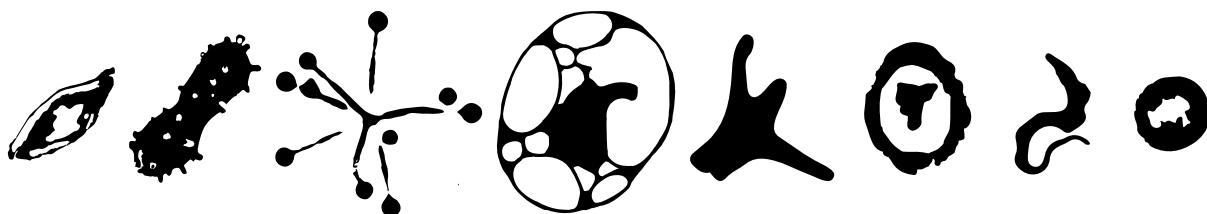
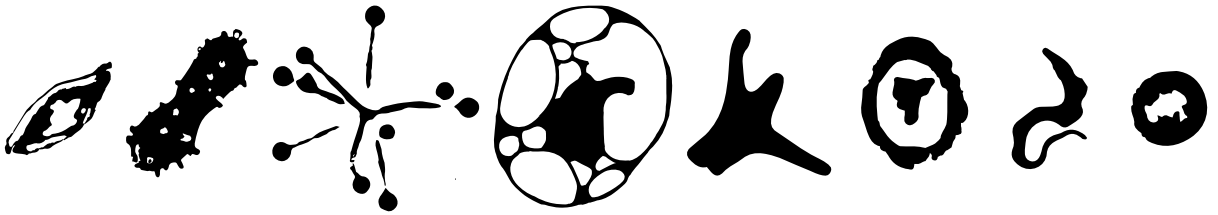


[MICRO]

Bestiary





Microbes live around us and within us, and our interactions with them are a matter of life and death, yet in regard to such issues as biodiversity, public awareness centers very heavily on “charismatic megafauna.” By making information about various microbes available and accessible, and by inviting imaginative response to that information, Microbestiary hopes to show, in welcoming and memorable ways, that the bustling microbial world is populated by strange and beautiful characters that are themselves quite charismatic.

This book showcases the “charismatic” nature of microbes through the use of a photographic process called Chemigrams.

We hope you enjoy.

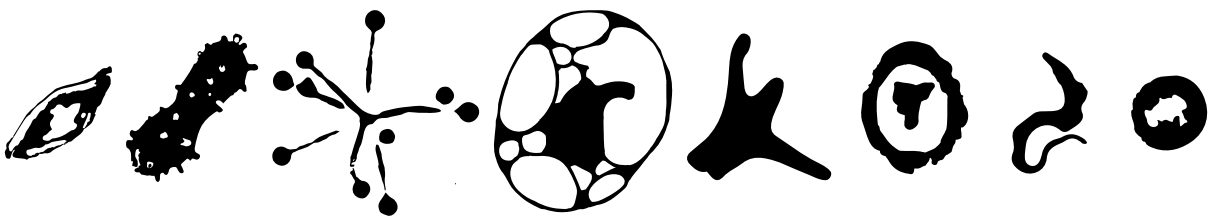
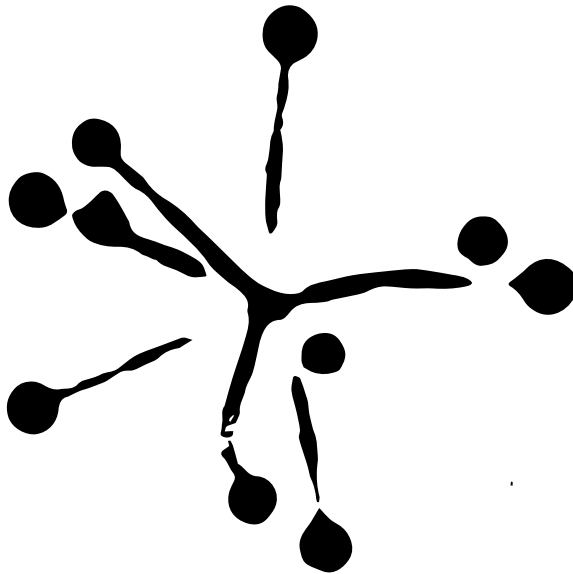


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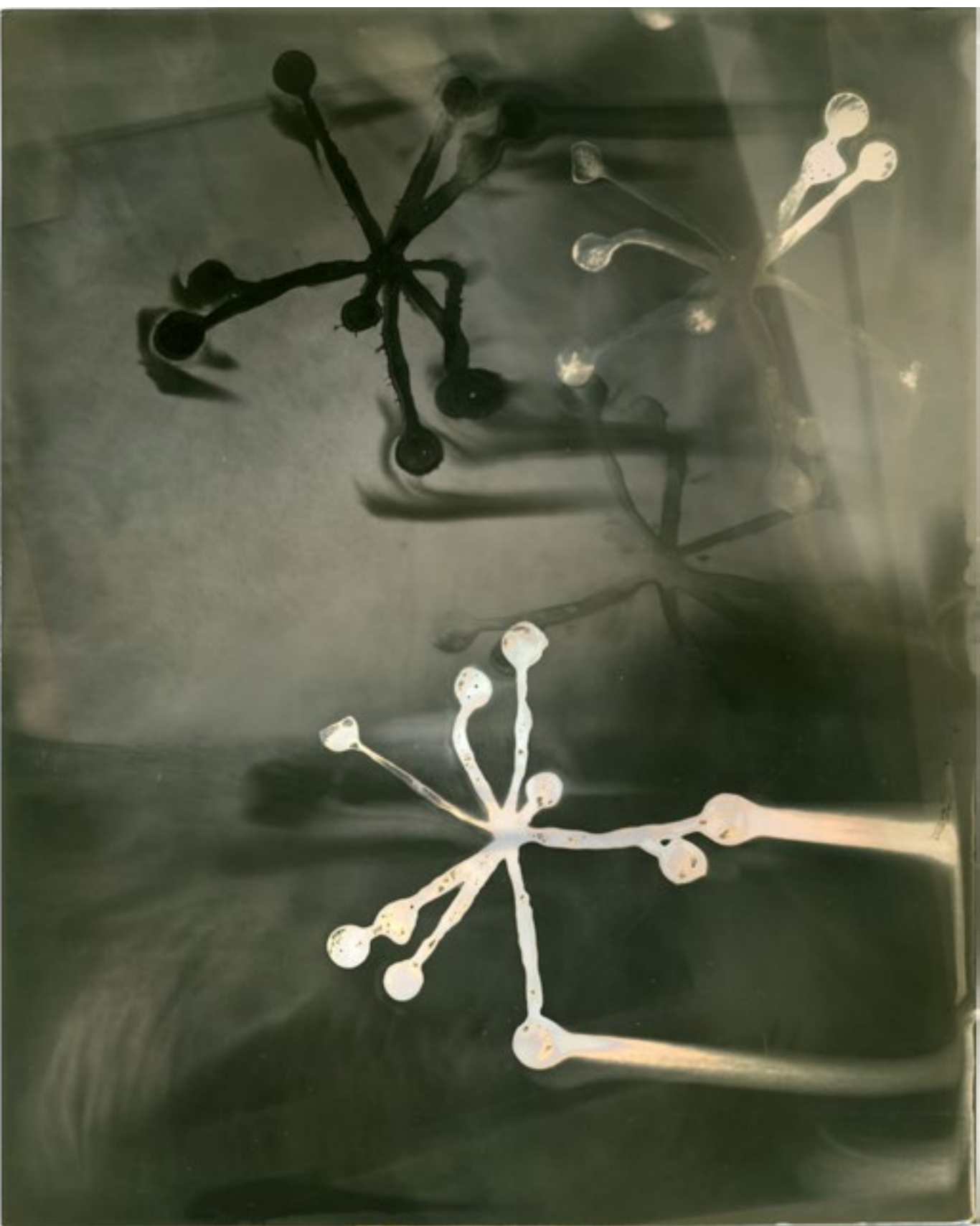
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Planctomyces bekeffi

Planctomyces bekeffi belongs to a strange but widely distributed bacterial group known as the *Planctomycetes*. This particular organism was first observed in the 1920s in a Hungarian waterway by a teacher in the Buda Saint Emeric Gymnasium of the Cistercian Order. Due to the unique shape of its microcolonies, similar to the head of a dandelion, this bacterium was originally mistaken for a fungus. This species is distributed throughout temperate freshwater ponds and lakes, and, befitting its flower-like appearance, it “blooms” periodically in the late summer or early fall.

























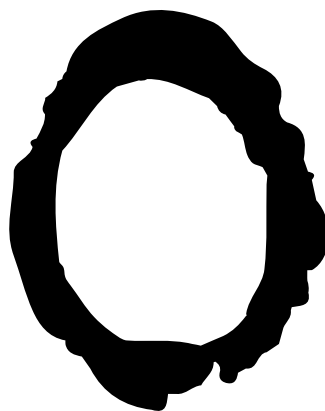






Cryptosporidium Species

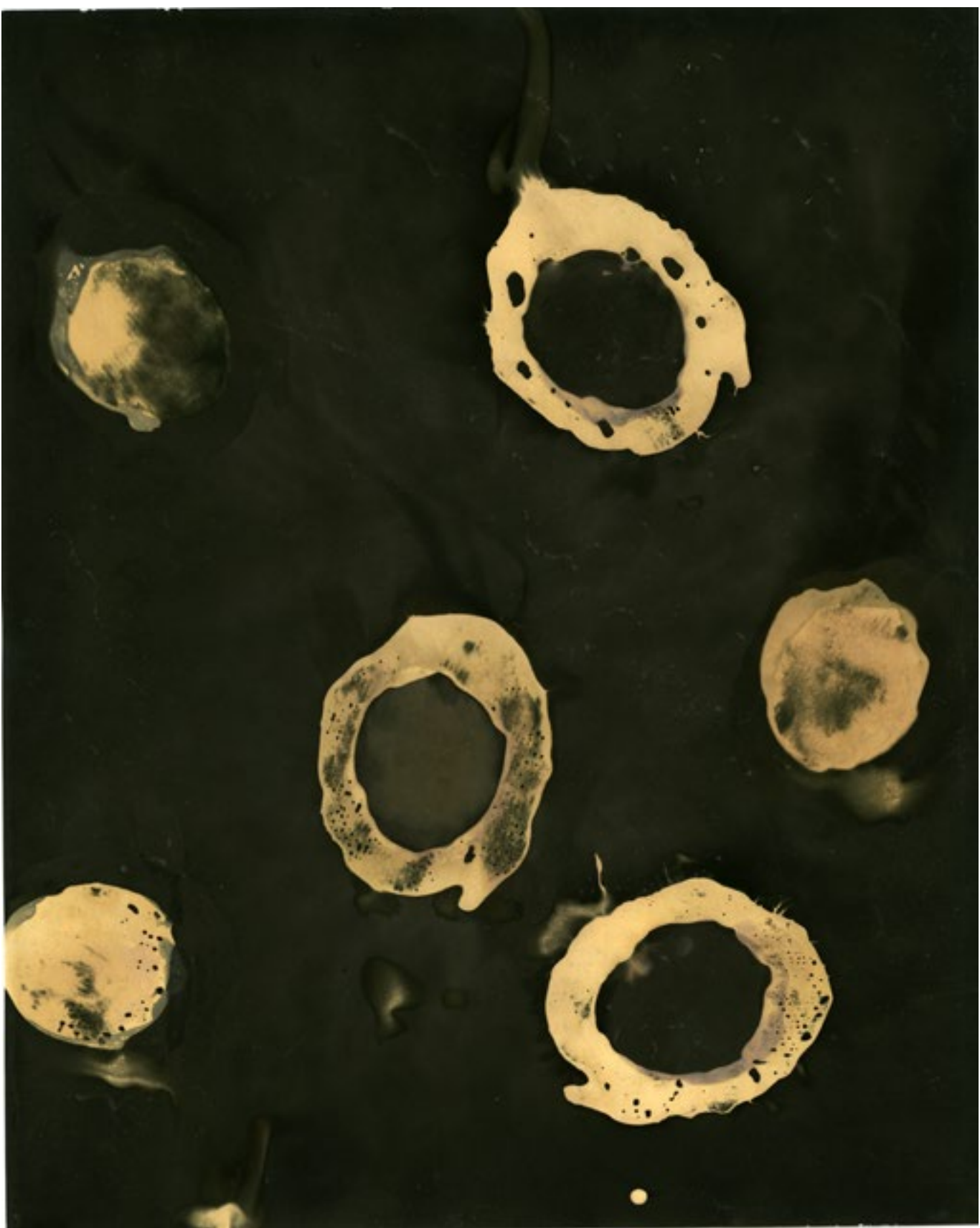
Cryptosporidium or "Crypto" for short is an apicomplexan parasite that can cause disease in a wide variety of species. *Crypto* can cause intestinal distress in its hosts and can trigger symptoms such as diarrhea, stomach cramps, nausea, vomiting, and weight loss. Since this parasite lives in the intestine, it is predominantly shed in the stool, where it can be passed to other hosts. Because of its ability to pass readily through feces, childcare facilities are at particular risk for a breakout of this disease. Healthy individuals can recover from this disease without much treatment, whereas people with weakened immune systems could have a more.



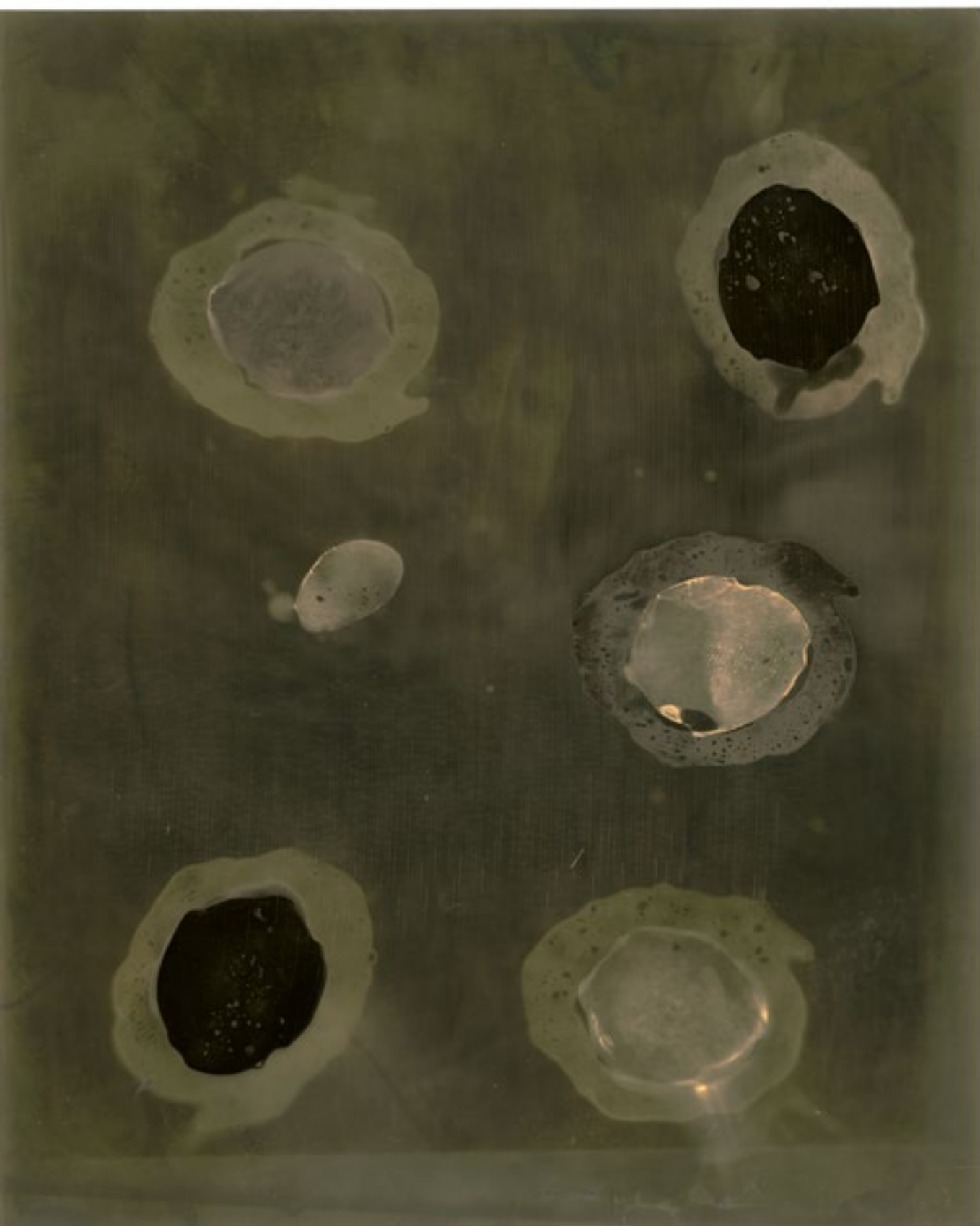










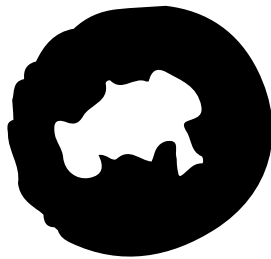




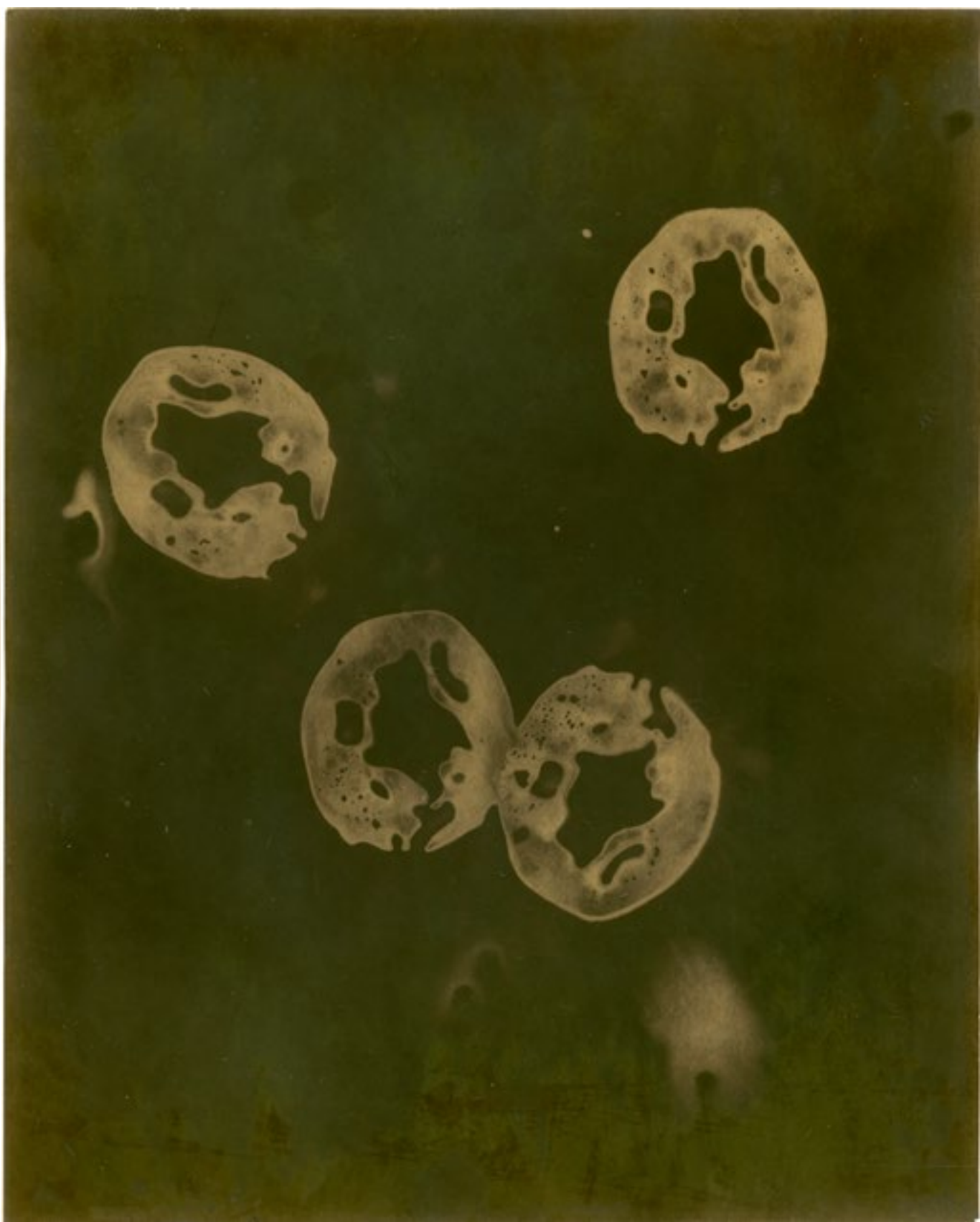


Isospora Species

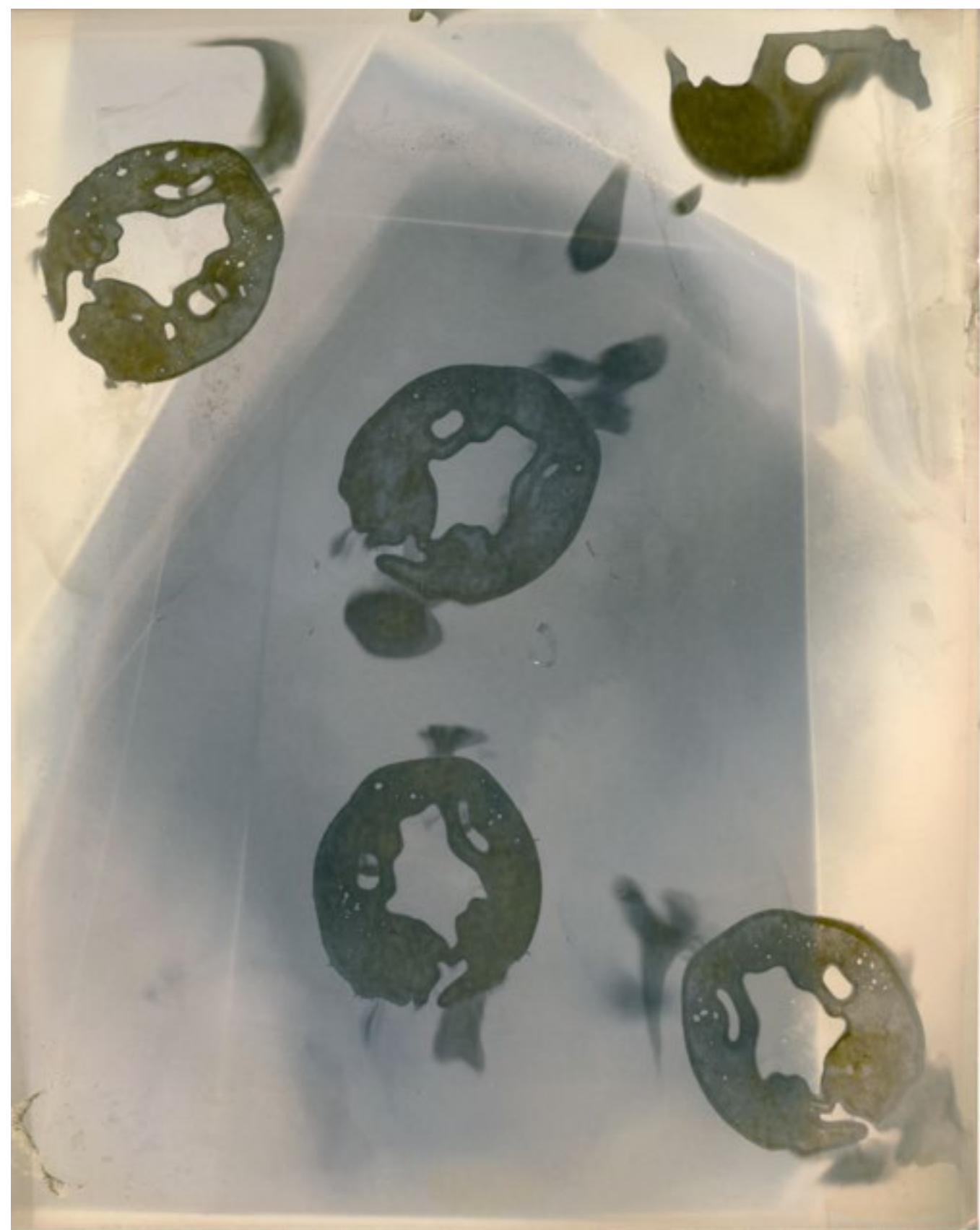
Isospora is a protozoan parasite belonging to the family Eimeriidae that can live within the digestive tracts of carnivores and sometimes omnivores. While this parasite can infect multiple species, it is considered highly host-specific and tends to only parasitize a single host species. *Isospora* is thought to be only mildly pathogenic but can cause symptoms such as diarrhea, weight loss, and fever. Much like other intestinal parasites, it is passed to other hosts through the fecal-oral route, which can include contaminated food and water sources. While conventional disinfectants are ineffective against this transmission, some control measures include ammonia-based sanitation, isolation of infected individuals, and avoidance of crowding, especially in animal husbandry situations such as kennels.













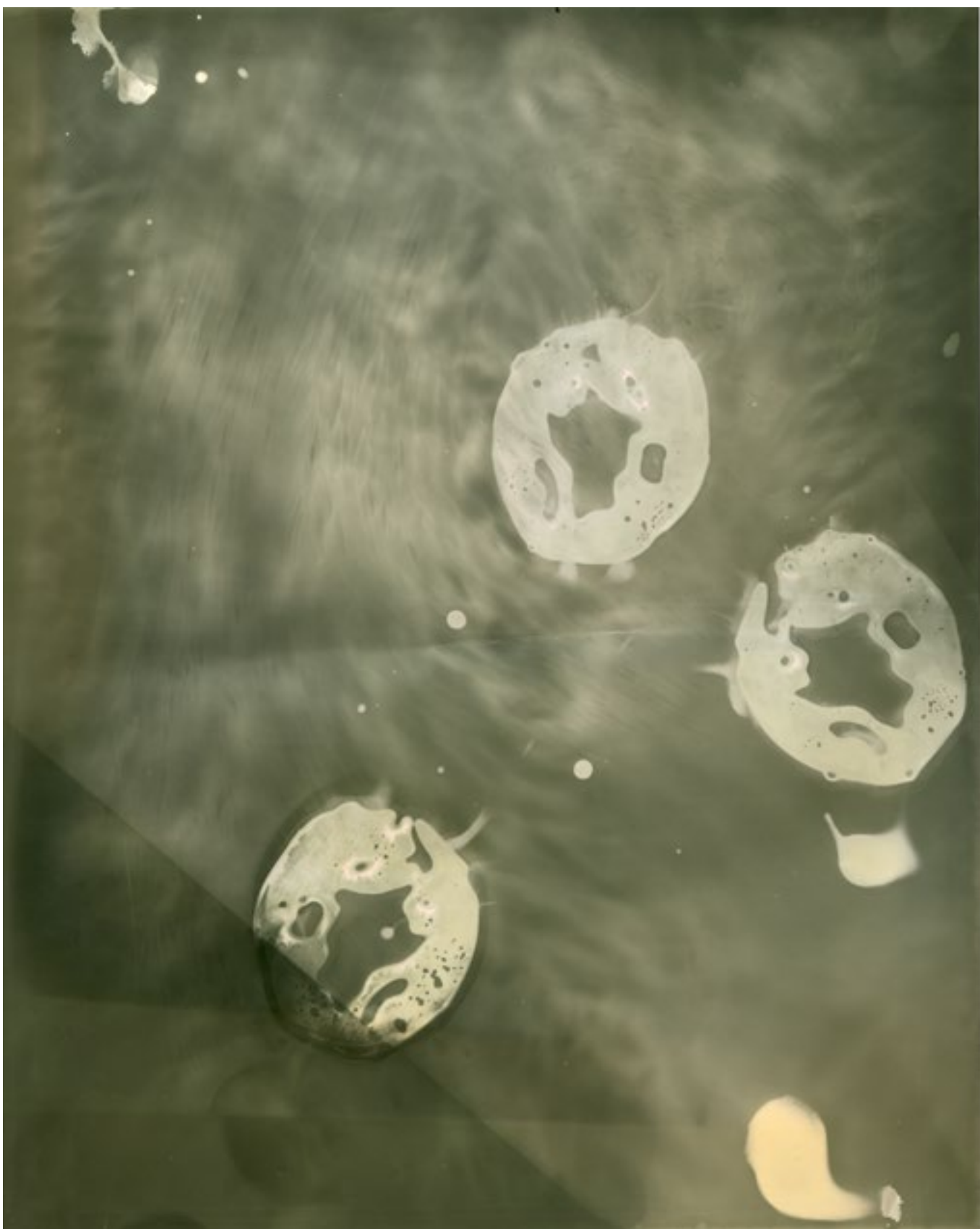
















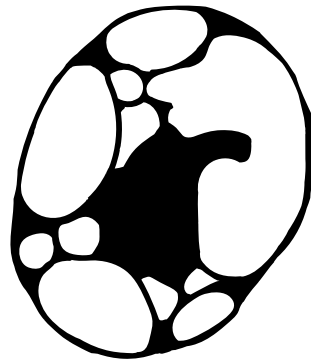






Gemmata Obscuriglobus

Gemmata obscuriglobus is a bacterium of the phylum *Planctomycetes*, first described in 1984. *G. obscuriglobus* has been described as “the platypus of microbiology” because of its unusual combination of features. *G. obscuriglobus* is one of the few bacterial species known to synthesize sterols, a process critical to the maintenance of eukaryotic cell membranes and ubiquitous in eukaryotes such as plants, animals, and fungi.





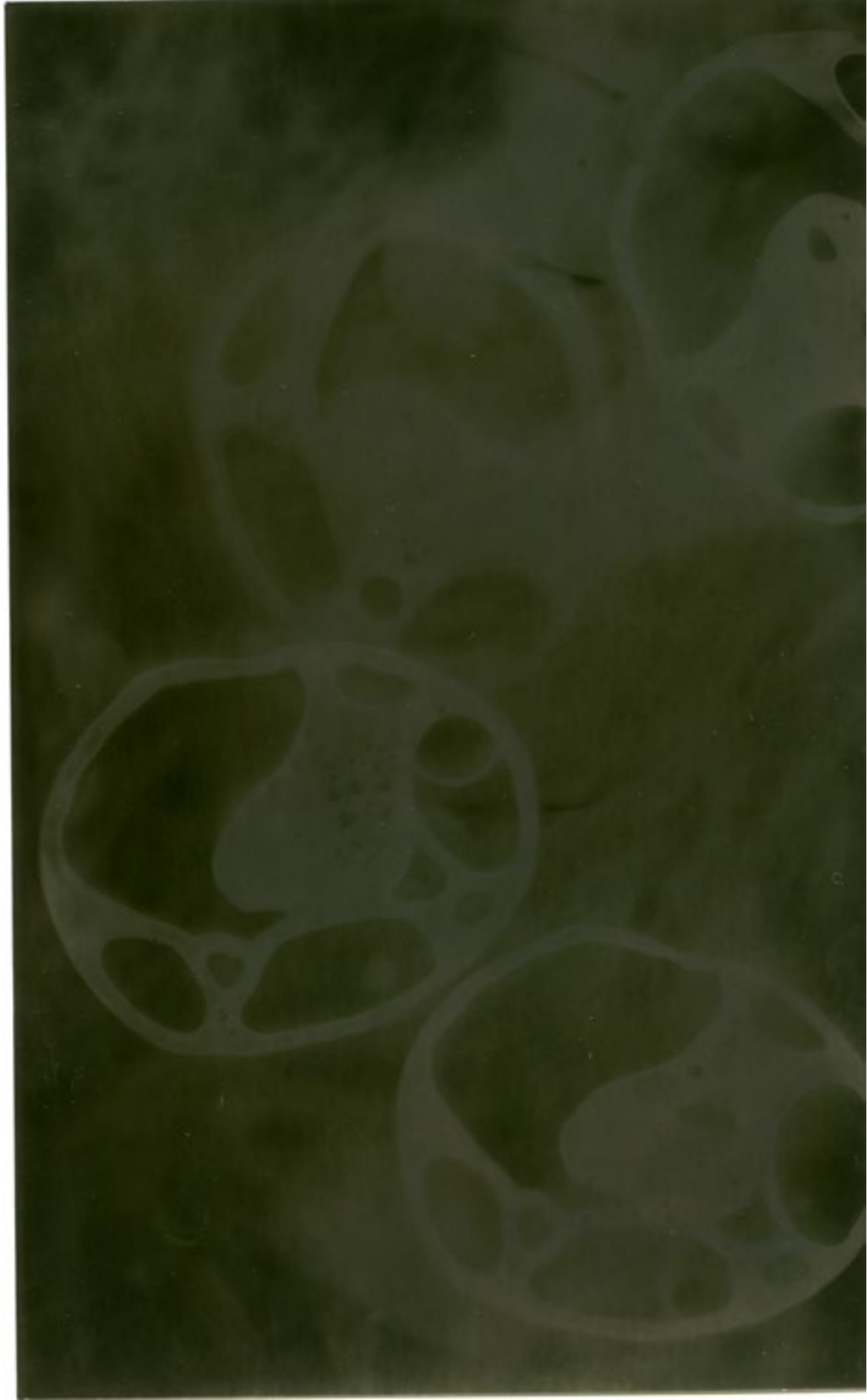




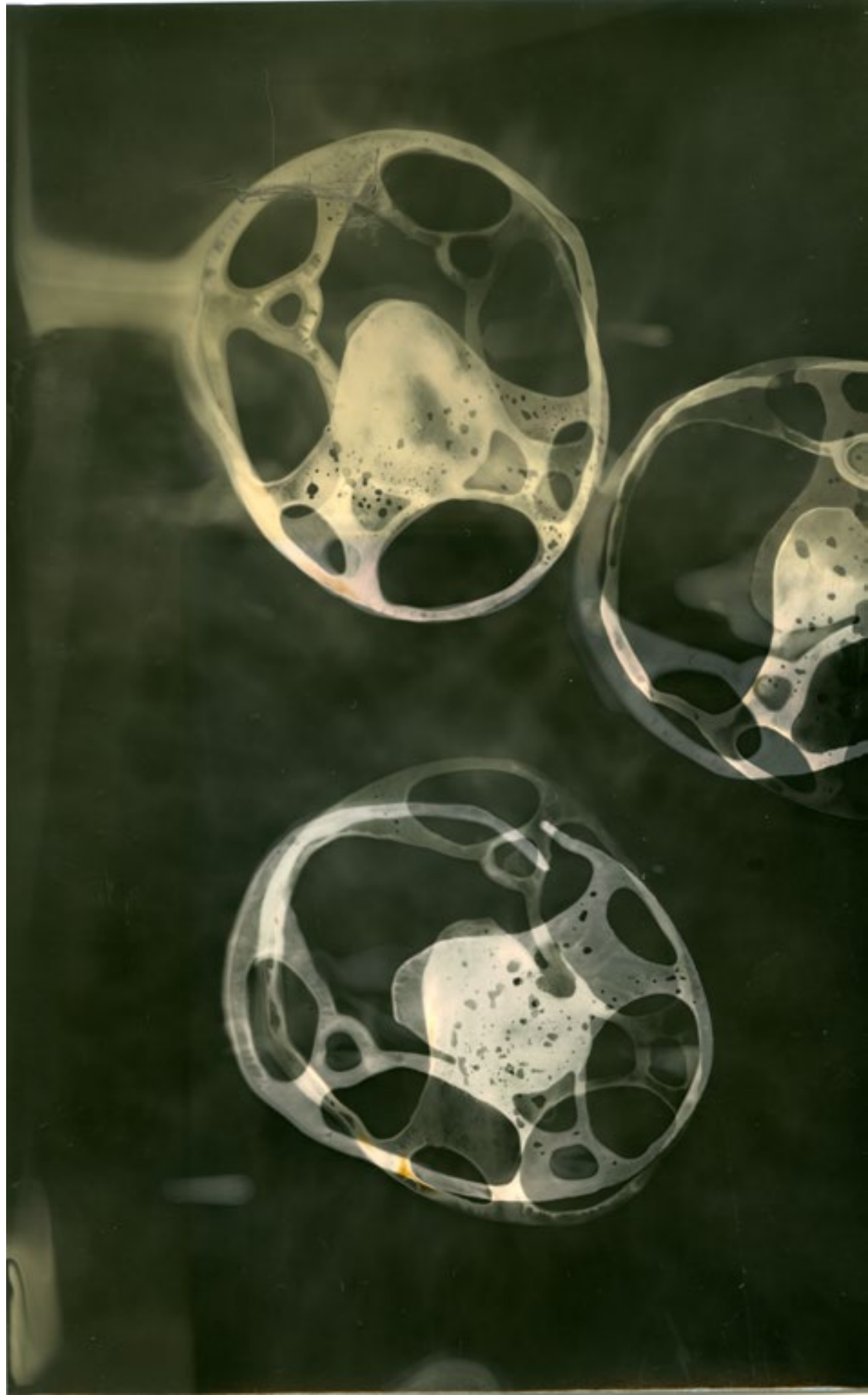


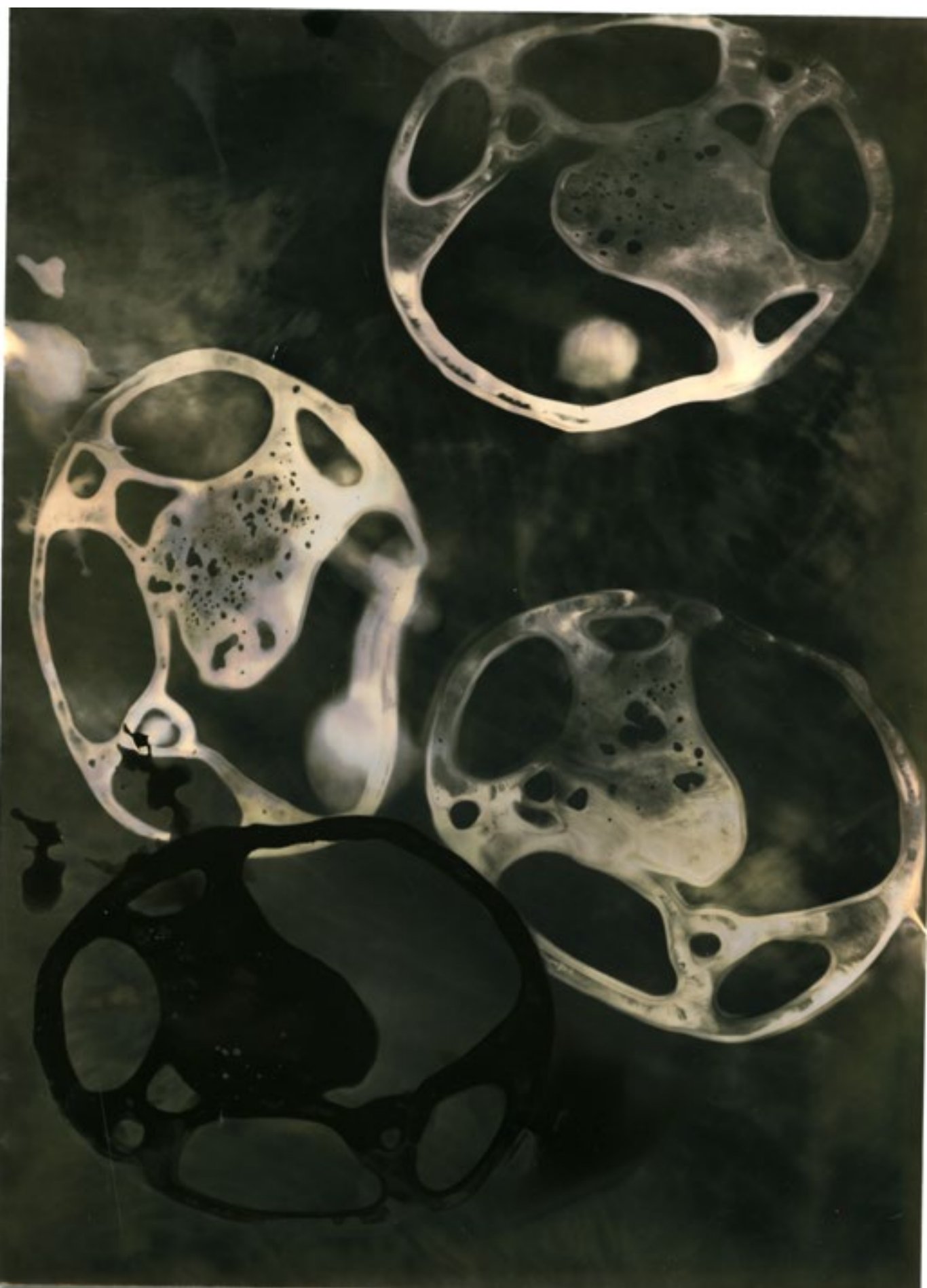






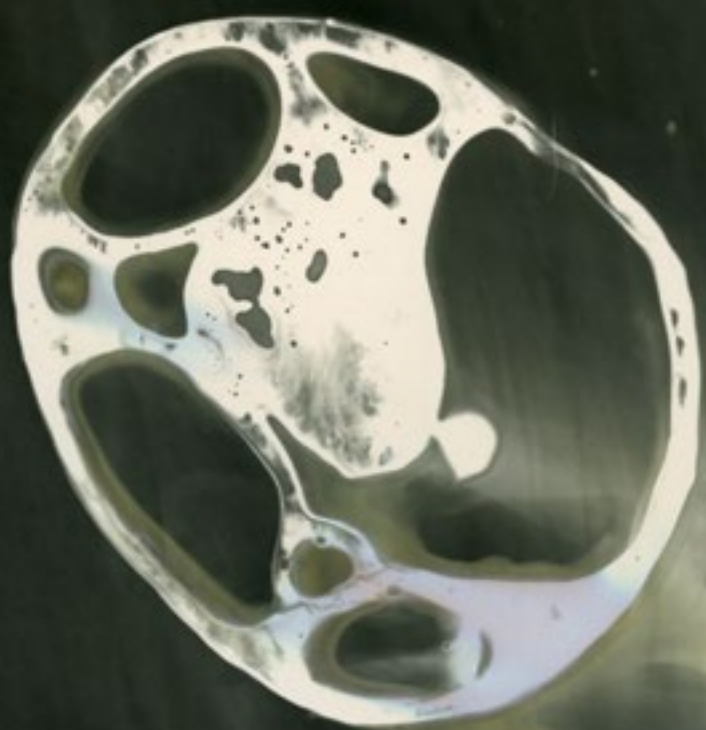








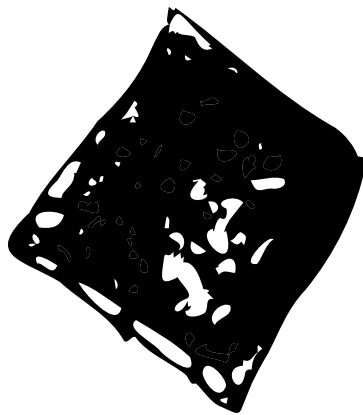






Haloquadratum Walsbyi

Haloquadratum walsbyi is an archaeon that was first observed in the 1980s by a British microbiologist studying microbes present in the extremely salty environment of pools in the Sinai. This microbe was extremely hard to culture, with the first successful pure laboratory cultures produced 24 years after its original discovery. This micro-organism can only grow when the salt concentrations of its environment are at least five times more concentrated than seawater. When these cells multiply they don't always completely separate and can form sheets of microbes that resemble postage stamps.

















Acknowledgements

The Microbestiary is grateful to all of the scientists and artists that have contributed their images, knowledge, and artwork. This book, along with the progress made on the Microbestiary's mission of education and engagement, would not have been possible without your willingness to share your research and vision.

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