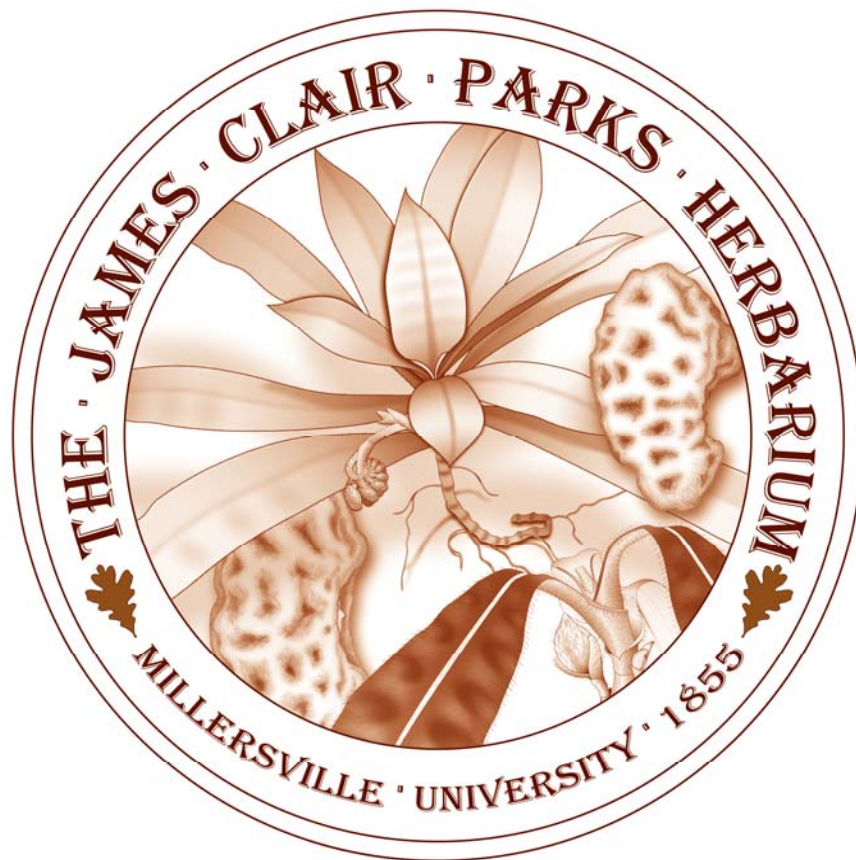


PARKSIA

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useful information regarding plants.

PARKSIA

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About Parksia

Parksia is published periodically by the James C. Parks Herbarium of The Department of Biology, Millersville University of Pennsylvania. It is dedicated to publishing short encyclopedic articles and essays containing useful information about plants in our world. *Parksia* is available for free, on the Web at <http://herbarium.millersville.edu>. The street mailing address for the Herbarium is James C. Parks Herbarium, Department of Biology, Millersville University of Pennsylvania, 288 Roddy Science Building, 50 E Frederick St, Millersville, Pennsylvania, 17551, United States of America.

Contributions

If you are interesting in contributing to *Parksia*, please send correspondence to the *Editor* at the address above.

THE USE OF ALGAE IN THE FORENSIC INVESTIGATION OF PUTATIVE DROWNINGS

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Diatoms are minute, ubiquitous unicellular algae present in all types of natural water bodies. When a person drowns, they violently inhale water and, in natural bodies of water, this water will have diatoms in it. The force of this inhalation causes alveolar-capillary membranes in the lungs to rupture, allowing the diatom frustules to enter the blood stream. The still-beating heart of the drowning victim then transports the diatoms in the bloodstream to organs in the body. If the body had instead entered the water postmortem, water with diatoms may eventually enter the lungs by sheer mechanical pressure alone, but those diatoms will not enter the blood stream since the force of passive entry is too low for capillary rupture and the heart is not beating. The standard Diatom Test for confirmation of drowning is to sample marrow of an intact femur of the putative drowning victim and to look for diatoms. Although other organs (e.g. kidneys, liver, or brain) may be sampled, femoral marrow is popular since the marrow of an intact femur is sealed from possible soiling from some external source of diatoms. If diatoms are found, then the case for drowning is strong, and the investigation can then move to determining (i) where the drowning occurred, (ii) whether the drowning was accidental, suicidal, or homicidal, and (iii) how long the body had been lying in the water. See Aggrawal (2005) and Hardy and Wallace (2012) for interesting case studies.

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