



United States Department of the Interior

NATIONAL PARK SERVICE
NATIONAL CAPITAL REGION
1100 OHIO DRIVE, S. W.
WASHINGTON, D.C. 20242

N1429(NCR-PNS)
July 14, 1986

Memorandum

To: David Murphy, Chief Ranger, C & O Canal, National Historical Park

From: Plant Pathologist/Integrated Pest Management Coordinator, Center for Urban Ecology

Subject: Allegheny Mound Ants, Formica exsectoides, at Great Falls Park, Maryland

At the request of Christine Kinneary, Park Ranger, Carol DiSalvo, John Short, and I visited Great Falls Park, Maryland, on June 10, to examine the Allegheny mound ants. Concern centered on the relationship of the ants to the current and proposed trail system. The following comments and recommendations are based on our observations and discussions with Ranger Kinneary.

The current trail system is haphazard, poorly marked and very confusing. Most likely the visitors who happen upon the trails are casual walkers primarily interested in the canal and the river. Once on the trails these visitors become confused and lose direction. The "main trail" passes through the largest array of ant mounds in the park. Visitors walking slowly or resting on the trail can easily and unexpectedly find themselves surrounded by ants. The ants large mandibles can cause a painful bite, particularly discomforting to children.

Routine use of the trail has had a detrimental effect upon the ant colonies. Casual vandalism appeared to be a common occurrence along the trail with sticks and stones being used to disrupt the mounds.

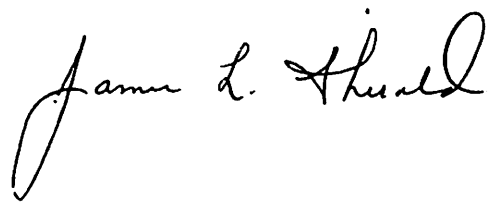
The main interpretive trail should be relocated out of the principal ant area as indicated on the enclosed revised "Gold Mine Interpretive Trail" map. As discussed on our visit, however, a trail through the ant colonies should still be available for those visitors specifically interested in the ants. The trail could extend from point 2 (see map) to the tow path or back to the main trail. The trail should be unmarked or at the most be discretely marked to avoid casual use. It would be unwise to over interpret this resource since extensive casual visitation could lead to increased vandalism. An "under the counter" interpretive brochure should be prepared and a collection of literature made available to those specifically interested in the ants.

Allegheny mound ants require the warmth of the sun for the success of a colony. Consequently, mounds are most abundant in open locations such as along trails. As shade encroaches, colonies will decline. Rerouting the main trail out of the ant colonies should not have a major adverse impact on the ants. If an area becomes too shady, ants will simply move to a more exposed location. On our visit we were surprised to see that colonies were not restricted to the trails and roadways, but were also quite prevalent in natural forest clearings.

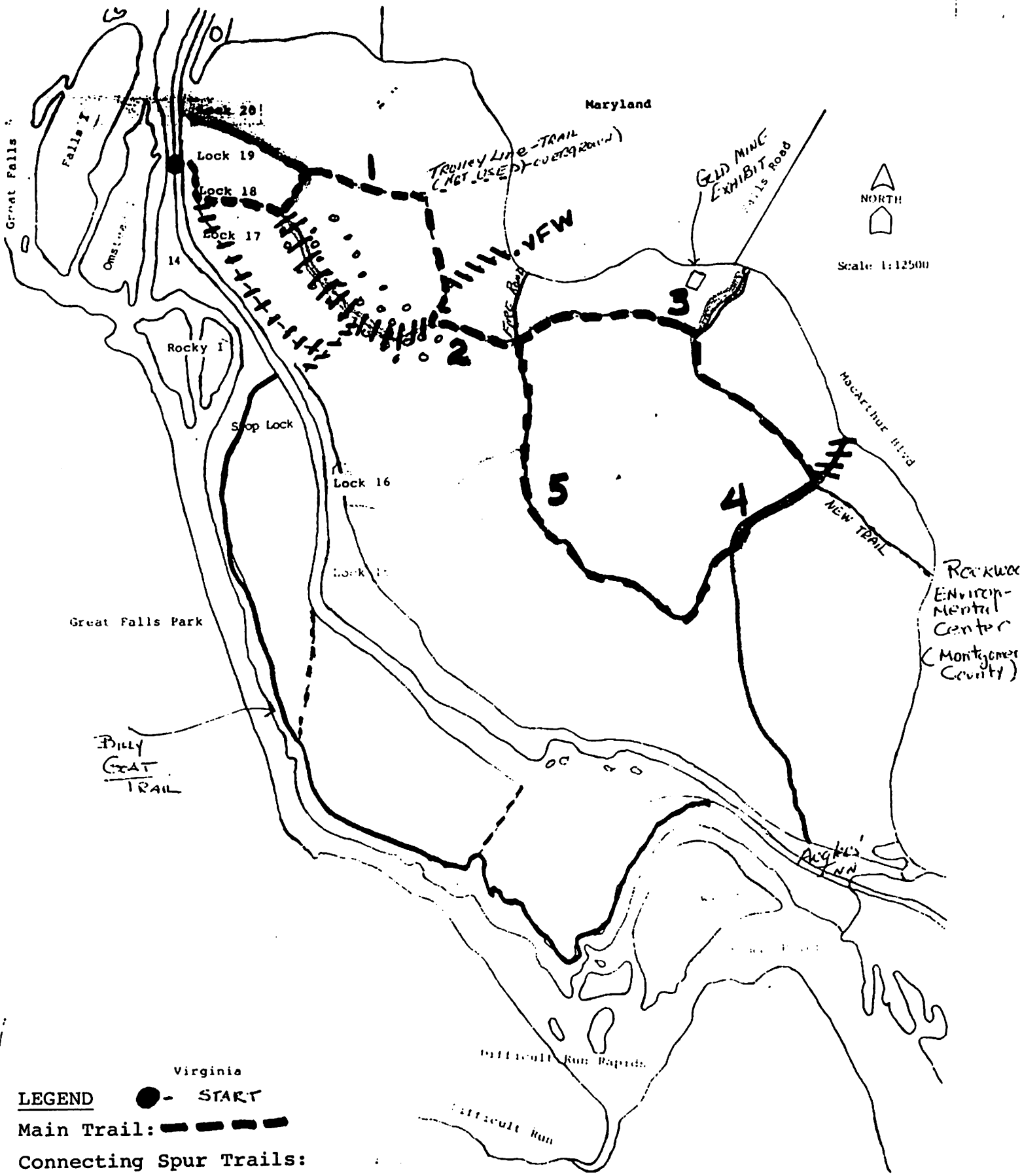
Although the Allegheny mound ant is a common native insect, the abundance of mounds at Great Falls presents an interesting and valuable park resource. Consideration therefore should be given to expanding the monitoring program initiated in 1978 by Karen Jackson. Monitoring would be useful in the interpretive program as well as in assessing the long term status of the population. It would also provide a useful project for students, Scouts and others interested in the park or the ant. The protocol for monitoring should be firmly established and adhered to so as to develop a set of comparable data. Such factors as mound size - height, diameter, and circumference; activity - active, inactive; location; degree of shade; and vandalism - type; should be included in the monitoring program. Monitoring could be limited to the trail system, roads and other frequently visited locations in the park and should be performed at least every five years.

We appreciate the opportunity to comment on the issue and will be happy to help in the future. In particular, we would be interested in assisting with an interpretive brochure and a display if the park is interested. Attached are several articles on the Allegheny mound ant that should be of interest to the park staff.

Enclosures



"GOLD MINE INTERPRETIVE TRAIL"



Scale 1:12500

LEGEND

- - START
- Main Trail: **-----**
- Connecting Spur Trails: **—————**
- Discontinue Trails: **|||||**

Wayside Exhibits:

- 1.....Trolley Line
- 3.....Gold Mine
- 5. Earthen, Civil War fortifications.