



UNNAMED TRIBUTARY OF MORMON BRANCH UPSTREAM at SR 19, Marion County 4/24/01

BioRecon: A rapid, cost-effective screening mechanism for identification of biological impairment

Purpose

The purposes of this assessment were to monitor the health of this stream, to examine the makeup of the macroinvertebrate community of such a small stream, and to collect biological information to be used in further refinement of the biorecon and other bioassessment methodologies for the state of Florida

Basin Characteristics

This small tributary of Mormon Branch (reported on separately) is roughly 150 m in length. Its source is groundwater seepage. At its source, it flows directly from the ground beneath a very small (1 – 2 ft) prominence in the forest in an area lined with cabbage palms and native blueberries. Mormon Branch itself is a tributary of Juniper Creek, the run from Juniper Springs, a first magnitude spring located within the Ocala National Forest. Juniper Creek flows into Lake George (a part of the St. Johns River) very close to the Marion/Lake county line. This small stream was sampled from its mouth at Mormon Branch a distance of 100 m upstream. The drainage basin of this stream is 100% natural. There is no known human development in its watershed. This is probably the least-developed site ever monitored by FDEP Central District biologists.



Results

Not surprisingly, the results of this biorecon indicate that this small tributary of Mormon Branch is in excellent biological health.

The macroinvertebrate assemblage was not as diverse in this stream as was found in Mormon Branch downstream, no doubt due to the lack of recruitment time available for macroinvertebrate colonization along such a short run. Nevertheless, it passed the thresholds for all three of the component metrics used in this type of assessment in the Florida peninsula. There were 30 different macroinvertebrate taxa found, including 6 from the sensitive “EPT” group (larval mayflies, stoneflies, and caddisflies). It scored a 19 on the Florida Index, a means of evaluating the macroinvertebrate community based on the presence or absence of specific indicator taxa. The most abundant taxon collected in the sample was the amphipod *Gammarus*. One other interesting crustacean collected was the isopod *Cyathura polita*, which is an oligohaline estuarine form sometimes encountered in somewhat saline areas of the St. Johns River. The caddisfly larvae collected included *Molanna tryphena*, a species rarely encountered this far south in the Florida peninsula. The assessment of the habitat at the site was also very good. Out of a possible score of 160, the site scored 145, putting it in the “optimal” category for aquatic and shorezone habitat.

Significance

These results suggest that the ecological health of this tributary of Mormon Branch is very good. The excellent biological community and optimal habitat assessment are evidence of a healthy system.

Suggestions

This unaltered little area of Florida should not be touched. Near-pristine areas like this should be preserved to provide havens for rare and endangered species and safeguard biodiversity. Continued biomonitoring of this site and Mormon Branch proper are very important.

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