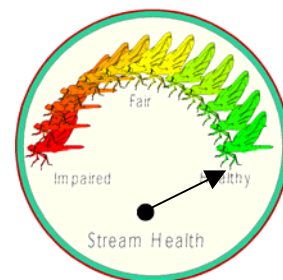




EcoSummary

BioRecon Report



MORMON BRANCH at SR 19, Marion County 2/1/00 and 4/24/01

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

Purpose

The purposes of these assessments were to monitor the health of Mormon Branch and to collect biological information to be used in further refinement of the biocon and other bioassessment methodologies for the state of Florida.

Basin Characteristics

Mormon Branch is a second-order 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. Mormon Branch has at least one tributary of its own, a roughly 150m unnamed seepage stream which flows into the main stream near the sampling site (reported on in a separate Ecosummary). Mormon Branch was sampled a short distance upstream of the bridge at SR 19. The drainage basin of Mormon Branch is 5150 acres in area, within which land use is almost 100% natural. The only development within the watershed is a forest service boat ramp and park on the north shore of Wildcat Lake just across the line in Lake County, and a handful of scattered residences. Other than the road crossing (where, incidentally, many large catfish carcasses are frequently found deposited by someone!), there is no known human alteration of the land near the stream itself. This is one of the least-developed sites monitored by FDEP Central District, biologist.

Results

The results of the two biocon assessments performed at this site in 2000 and 2001 indicate that Mormon Branch is in excellent biological health. On both occasions, it passed the thresholds for all three of the component metrics used in this type of assessment in the Florida peninsula. In February 2000, 39 different macroinvertebrate species were found, including 10 from the sensitive "EPT" group (larval mayflies, stoneflies, and caddisflies). It scored a 27 on the Florida Index, a means of evaluating the macroinvertebrate community based on the presence or absence of specific indicator taxa. Results were similar in April 2001, when there were 38 taxa collected, including 9 EPT. The Florida Index score was 25. Larval odonates (dragonflies and damselflies) were particularly diverse at Mormon Branch. Eight different species were collected in 2000 and ten in 2001.

These included some taxa rarely collected in the Florida peninsula, such as the dragonfly *Neurocordulia virginensis*. Among the caddisflies collected were *Molanna tryphena* and *Pycnopsyche* sp. With one exception (Rasmussen and Denson 2000), *Pycnopsyche* has not been found this far south before. An assessment of the aquatic habitat at the site was also very good. Out of a possible score of 160, the site scored 138 in 2000, and 142 in 2001. In both instances, these scores represent an optimal habitat assessment.

Significance

These results suggest that the ecological health of Mormon Branch is very good. The excellent biological community and optimal habitat assessment are evidences 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 is very important.

Citation:

Rasmussen, A.K. and D.R. Denson. 2000. Range extension, ecological notes, and new records of *Pycnopsyche indiana* (Trichoptera:Limnephilidae) from Florida. *Entomological News*, 111(5): 359 – 366.

For more information, please contact: Dana R. Denson DEP Central District 3319 Maguire Blvd., Suite 232 Orlando, FL 32803 (407) 894-7555 email: dana.denson@dep.state.fl.us