2020 Annual Marsh Report

I. Status of the Marsh in 2020.

In year two following the cessation of the draining of the marsh it has essentially returned from a state of being completely drained in summer for each of three years in a row to a state comparable to that prior to the drainage as judged by the species composition and relative abundance of its avifauna. Although the flora and vertebrate fauna of the marsh have also been monitored during the same period the data for those groups are not as extensive as is that for the birds. Over the winter and early spring of 2019-20 water levels in the marsh increased to fully flooded, i.e. the level of water was at the top of the top board in the water control device or was completely flowing over the device, beginning in the last week of January 2020 and continuing to mid-April. The large biomass of dead and decomposing emergent tall grasses, chiefly Reed Canary Grass, *Phalaris arundinacea,* that invaded the marsh when it was drained and died when the marsh was allowed to flood naturally in 2019 had completely decomposed by the summer of 2020. Over the winter and early spring observations by Jim and Karen Vedder, Rita O'Clair and one of us (CO) indicated that between mid-December 2019 and mid-March 2020 from two to eight adult Trumpeter Swans occupied the marsh intermittently. Between 1 November 2019 and 31 March 2020 migrating and wintering waterfowl ranged up to 156 individuals. Waterfowl numbers comprising between seven and ten species exceeded 80 individuals half the time during the period. At least six species of waterfowl, Canada Goose, Mallard, Wood Duck, Ring-necked Duck, Hooded Merganser, and for the first time of record Cinnamon/Blue-winged Teal raised at least one brood of ducklings in the marsh in late spring or summer of 2020. On 26 May 2020 Jean Shreve observed an adult male Cinnamon Teal with one duckling, and on 3 August 2020 one of us (CO) observed a female Cinnamon/Blue-winged Teal with six ducklings. Other birds such as the Pied-billed Grebe, Virginia Rail, Sora and Marsh Wren that were rare or absent at the marsh in 2019 had returned to numbers comparable to those prior to those years when the marsh was dry except for the marsh wren the numbers of which remained relatively low.

II. Cattail Grooming Test.

In the 2019 Annual Marsh Report we considered the pros and cons of each of the three general methods for the control of cattails, chemical, biological, and mechanical, in reference to Three Meadows Marsh. We argued that a mechanical approach would be the most appropriate for our marsh at this time. Therefore in August of this year one of us (CO) began a test of a method recommended by Beule (1979) for the control of cattails. The method entails cutting the stems of cattails at least 7 cm below the surface of the water in summer when the water level is lowest. This method in which "more than 90% of the Typha reproduction was killed."was found to be preferable to cutting the stems above water which resulted in "no apparent kill" (Beule, 1979). We are employing a commercially available device called an Aquatic Vegetation Groomer to cut the cattail stems at the desired level. The site of our test is the same as that

used for the Pig Experiment (see the 2018 Annual Marsh Report). The steel fence posts delineating the area of the Pig Experiment have remained in place and will be useful as reference markers for the cattail grooming test. The vegetation to all appearances has completely grown up in the area since the Pig Experiment was terminated, except that the areal coverage of Reed Canary Grass has been markedly reduced. We will continue cattail grooming this year as long as we have access to live cattail stems as late fall and winter rains begin filling the marsh.

III. Plans for 2021

In 2021 we plan to monitor the results of the cattail grooming performed in 2020. If evidence from the grooming shows potential for effective control of cattail distribution in Three Meadows Marsh we plan to expand the area of cattail grooming beyond the test area. The outcome of our test will inform the discussion of how often to drain the marsh if it is necessary to do so.

IV. Literature Cited.

Beule, J. D. 1979. Control and management of cattails in southeastern Wisconsin wetlands. Technical Bulletin No. 112. Madison, WI: Department of Natural Resources. 40 p.

Submitted by,

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