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A PRELIMINARY REPORT ON THE RELATIONS BETWEEN SAND
SUCKING BOATS AND WALLEYED PIKE SPAWN IN
LAKE ST. CLAIR AND THE CHANNELS
OF THE ST. CLAIR RIVER

by

James W. Moffett

In accord with an agreement between the Conservation Department and the Detroit Sportsmen's Congress, a preliminary study of the relations between sand sucker operations and the walleyed pike spawning was begun. The author was delegated to investigate the claims that these gravel and sand boats, dredging in the north channel of the St. Clair River and its distributaries, were taking spawn of the walleyed pike along with the products dredged from the bottom.

On May 9, 1940, a preliminary trip was made in company with E. E. Tucker, Supervisor of District 17 for the Division of Field Administration, Conservation Officers V. P. Elliott and Henry Predmore, from Algonac, Michigan, down the north channel into the middle channel, across the flats from there to the "sny" or Chenal A Bout Rond and up this channel to Algonac. Throughout the course of this trip the channels were watched closely and soundings checked on the U. S. Lake Survey map which was at hand. According to Mr. Tucker, these channels have been dredged deeper than the soundings show on the map. Depths run between 20 and 90 feet with the average between 40 and 50 feet. The channels were found to be

block U-shaped. Very little shoal area exists along the banks and the sides drop rapidly into the bottom. At the lakeward end of these channels there is a rapid shoaling to depths of 1-6 feet. The water at the lakeward margin of these channels is so shallow that sand dredging boats must return upstream to the ship canal before they can cross the lake to Detroit.

While returning up the Chenal A Bout Rond, the John M. McKerchey was encountered. This boat is of concrete construction and has a capacity of 600 cubic yards of sand or gravel. We went aboard to observe the sand-sucking operations. At the time we boarded her, the boat was sucking in 90 feet of water and taking a mixture of sand and fine gravel. The crew was amiable and anxious to show us all operations. Essentially, the process of sand and gravel removal consists of lowering a large diameter pipe which has a heavy steel plate at its lower end. This plate is toothed and scrapes over the bottom, loosening materials so they can be pumped by means of a centrifugal pump along with large quantities of water into a trough which runs lengthwise of the open hold. Traps are located at intervals along the bottom of the trough which can be opened to distribute the load. On each side of either end of the hold are vertical screens which withhold the gravel and sand but allow the water to flow off through holes in the sides of the boat. Silt, clay and fine organic debris are put into suspension by the agitation of pumping and are carried off by the water as it flows through these screens. Upon locating the desired gravel or sand beds, which according to the boat crew, are not too plentiful, the anchor is released upstream from the bed and the boat let downstream to the lower end of the desired spot. As the material is sucked up, the boat is moved forward on the anchor chain and side to side by the boat's motors. With average working conditions a boat can load 600 yards of material in from 2-6 hours. This material is often taken

from a space 2-4 boat lengths (250-500 ft.) long and 20-50 feet wide. The John M. McKerchey was making one round trip every 2 1/4 hours and intended to do so throughout the open water season. No other boats were contacted, but it is understood that several others are engaged in this commerce. According to Mr. Tucker, these boats are restricted to an area at least 100 feet from any shore. No dredging is done on the St. Clair flats and none is allowed in the ship or south channel, except by government boats.

Examination of materials taken on board the John M. McKerchey revealed no traces of walleyed pike spawn. Furthermore, according to statements by the skipper, this boat never dredges in water shallower than 50 feet since materials found there are not suitable as building sand. From the evidences obtained and what little is known about the habits of the walleyed pike, it is almost a certainty that no spawn is removed by the sand suckers. Reports that the boat cargoes are often so loaded with spawn that they emit a very offensive odor seem unfounded. The crew of this boat could not recall any incidents where the odor of the bottom material was noticeable except on rare occasions when a sludge pocket or considerable amounts of organic ooze were taken by the pumps. During the spawning period of the walleyed pike temperatures are so low that decomposition of eggs, were they taken in large enough quantities, would not progress far enough to create a foul odor within the time required to take the gravel and sand and transport it to the unloading station (about a 7-hour run).

On May 12, 1940, a party comprising the Lake St. Clair committee of the Detroit Sportsmen's Congress accompanied us on a similar tour. It was not necessary to make the long trip of the channels since the John M. McKerchey was operating at the head of north channel just south

of Algonac. The whole party went aboard, inspected the boat, learned of its operation and the depth of water in which it usually worked. After a few questions, they agreed that the possibility of these boats taking spawn in the sand and gravel was quite remote. Members of this committee were: Charles Lorenzo, Chairman, Lloyd F. Eagan (President and Executive Secretary of the Congress), Paul Gabor, Tom Reid, Peter Helland, Charles Riddle, Al Neuling, Riney Paul and Tom Crewe.

This question cannot be definitely settled until more is learned about the spawning habits of the walleyed pike. It is suggested that this problem be investigated further. A study of the migratory habits of these fish around Lake St. Clair, the St. Clair River and the lower end of Lake Euron should be made. A cooperative investigation might be arranged between the U. S. Bureau of Fisheries and the Conservation Department. It might be that the Ontario Fisheries interests would also cooperate. It is the plan of the author to again visit this region when these fish are being caught in the St. Clair River to check the condition of their reproductive organs and to secure other data. There is a current belief that the walleyed pike run this river to spawn, but it is suspected that the fish in the river are spent. This heavy fishing usually occurs around the first week of June.

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