

ARTICLES

AN AIR PROPELLED BOAT USED IN MOSQUITO
ABATEMENT WORK IN UTAH

DON M. REES AND GLEN C. COLLETT

University of Utah, Salt Lake City, Utah

The extensive fresh and brackish water marshes near the shores of the Great Salt Lake in Utah are prolific mosquito producers. These marshes are difficult to inspect for mosquito breeding because they are usually inaccessible to motor travel and their immense size with the deep mud makes it impractical to attempt to inspect them on foot.

The marshes are created by drainage water meandering over an almost level plain produced by the receding waters of the Great Salt Lake. Many are temporary and their location and size vary with the season depending upon the fluctuation in the amount and place where the drainage water enters the marshes. Only a few roads enter the marshes and some of these are impassable, even to four wheel drive equipment, after storms or extensive flooding from irrigation drainage water. The water is usually too shallow in the temporary marshes and too covered with vegetation in the more permanent channels to permit the use of crafts with water propellers.

The large open marshes can readily be treated with insecticides by airplane but as larval production is constantly shifting in location and numbers it is necessary to determine from the ground the area to be treated before treatment can be economically made by airplane.

In 1954 the Box Elder County Fly and Mosquito Abatement District constructed and used an air propelled boat for mosquito abatement purposes on the extensive Bear River marshes in that district. The Salt Lake City and Davis County mosquito abatement districts jointly rented an

air propelled boat in 1954 to inspect marshes in these districts. As a result of this experiment the Board of Trustees of the Salt Lake City Mosquito Abatement District decided to purchase an air propelled boat.

These boats are not new in Utah as they have been in use for many years by scientists and sportsmen concerned with the study, management or hunting of waterfowl. The first published account of these craft was made by Williams and Jensen in 1945 who reported on their use in waterfowl management and research. Since then certain improvements have been made which now make these boats practical and efficient for inspecting extensive shallow mosquito producing marshes. The craft herein described was assembled during the winter for use during the 1955 season. In addition to inspection, it can be effectively used for carrying light larviciding equipment and larvicides in granular or liquid form which can be transported as concentrates and diluted in the field for use on small mosquito producing areas or to clean up after airplane treatment of larger areas.

The boat selected (Fig. 1) was made by the Anchor Boat and Steel Company, a company with headquarters in Salt Lake City. The boat shown in the accompanying illustration is made of aluminum and is 16 feet long and 6 feet wide. The bottom is of .091 inch aluminum and the sides of .064 inch aluminum. The motor is a rebuilt 85 h.p. Continental Airplane motor with a 70 inch special prop made for this purpose by Banks and Maxwell at Fort Worth, Texas. The trailer was

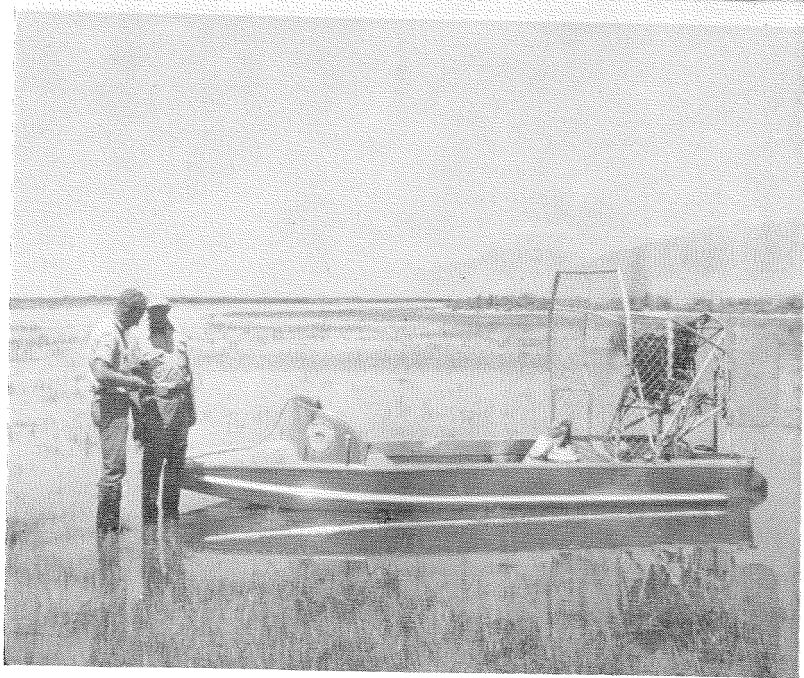
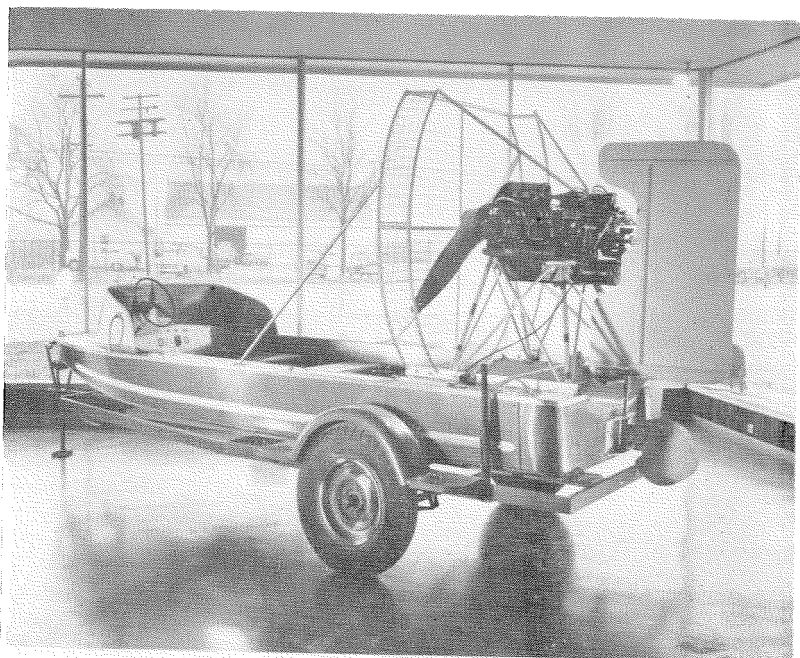


FIG. 1. Two views of the Utah air-propelled mosquito abatement boat.

constructed by the Anchor Boat Company. The boat, motor and trailer complete cost approximately two thousand dollars.

The boat can be operated in the field by one man. It will carry several men and their equipment over marshes, meadows and mud flats covered with but a few inches of water or in deeper open water covered with aquatic plants. The boat is capable of speeds up to 35 miles an hour in all types of environment from wet mud slick to deep water. At slow speed in deep water the draught is approximately 3 inches whereas at high speeds the boat planes. The only undesirable features detected to date in this equipment are the difficulties experienced in steering the craft in high cross winds and the overheating of the air cooled motor after prolonged runs at higher speeds. These are obviously only minor

difficulties but should be considered along with the advantages made possible by using an air propelled boat.

The use of an air propelled boat in Utah has made it possible to inspect repeatedly and with ease during 1955 areas on marshes and mud flats that were previously inaccessible (Fig. 1). Boats of this type have apparently become standard equipment for certain districts in Utah and will take the place of motor vehicles previously used, often unsuccessfully, in attempts to reach the prolific mosquito producing areas near the shores of the Great Salt Lake.

Reference Cited

- WILLIAMS, C. S. and JENSEN, G. H. 1945. A versatile boat for waterfowl management and research. Jour. of Wildlife Management Vol. 9, No. 3, July, pp. 191-192.

REVIEW OF RECENT PROGRESS IN MOSQUITO STUDIES IN CANADA¹

C. R. TWINN²

INTRODUCTION. During the past eight years considerable attention has been given to the study of mosquitoes and other biting flies in Canada. Much of this work has been performed on behalf of the Defence Research Board, Canada Department of National Defence, but recently the needs of the pulp and paper industry have also been given special attention. Many of the results have general application. Numerous papers based on these studies have been published since 1948; summarizing statements and references have been presented by Twinn (1950, 1952, and in press) and Freeman (in press).

This paper reports progress in the studies relating especially to mosquitoes and includes references to recently published and some unpublished work.

SYSTEMATICS AND DISTRIBUTION. In a review of some of the more important mosquito problems in Canada, Twinn (1949) presented a summary of the recorded distribution in Canada of 59 species of mosquitoes belonging to eight genera. Since then, several additional species (*Aedes hexodontus* Dyar, *A. implicatus* Vock. (= *A. impiger* of American authors), *A. rempeli* Vock., *A. pseudodiantaeus* Smith) have been found and many new distribution records obtained. This is largely the result of the Northern Insect Survey, carried out during the summer seasons of the past eight years by the Systematic Entomology Unit, Entomology

¹ Contribution No. 3307, Entomology Division, Science Service, Department of Agriculture, Ottawa, Canada.

² Head, Veterinary and Medical Entomology Unit.