The use of electrofishing equipment mounted in small boats to sample fish populations in freshwater lakes and rivers has been an accepted and useful practice for many years. The equipment employed is nearly always locally designed and great variations in techniques and performance are reported (Myers 1951, Rollefon 1958, Burnet 1959, and Patten and Gillaspie 1966). To a large extent this wide variation in equipment and technique is a result of the great variability of water conditions, fish species and sampling needs in freshwater lakes and large rivers coupled with the fact that almost any electrofishing system will allow capture of some fish under conditions suitable to the particular system. In contrast, the less varied demands of electrofishing in small streams has resulted in more uniform and thus more highly developed methods (Cuinat 1967, Novotny and Priegel 1971).

The objectives of this study were to survey the equipment and techniques in use, to clarify the impact of the electrical variables influencing performance, to develop guidelines for constructing and operating fixed-electrode electrofishing boats, to build and test new types of such boats, and to pinpoint areas where additional developmental research should be carried out to provide future improvements in electrofishing methods.

Typical ac electrofishing boat used in Wisconsin for many years.