INTRODUCTION

Incubation behaviour in birds is controlled by a variety of internal and external factors. BAERENDS (1959) discussed the integration of many of these factors from an ethological viewpoint.

After considering factors concerning color, shape and size of eggs, incubation constancy, and prolonged incubation in birds, I decided to experiment on the Red-winged Blackbird (*Agelaius phoeniceus*), which has an incubation of 11-12 days, changing only the size of the egg to determine the mean length of prolonged incubation, on an adequate sample for statistical analysis.

METHODS

Red-winged Blackbird incubation behaviour was studied for three breeding seasons from April through July of 1966-1968: at Fremont, Nebraska, 1966, Wooster, Ohio, 1967, and Waterloo, Nebraska, 1968. Artificial eggs were made of plaster, clay or plastic to resemble the natural color. The eggs were made in five sizes with the intermediate size the same dimensions as normal Redwing eggs. Two egg sizes were made smaller and two egg sizes larger than normal Redwing egg size (1×). These were one-fourth (¼×, ¼ as long as normal; ¾ as wide as normal), one-half (½×), one and one-half (1½×) and three times (3×) the normal (1×) egg size (Fig. 1). Num