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**Jay Zimmerman\*** (jzimmerman@towson.edu) and **Coy L. May**. *Large odd order groups of fixed symmetric genus*. Preliminary report.

Let  $G$  be a finite group of odd order. The *symmetric genus*  $\sigma(G)$  is the minimum genus of any Riemann surface on which  $G$  acts. Suppose that  $G$  acts on a Riemann surface of genus  $g \geq 2$ . If  $|G| > 8(g - 1)$ , then  $|G| = K(g - 1)$ , where  $K$  is 15,  $\frac{21}{2}$ , 9 or  $\frac{33}{4}$ . We call these four types of groups LO-1 through LO-4 groups, respectively. Previously, we have shown that there are infinite families of each type in a non-constructivist way. A number of new examples of such groups are constructed. In particular, nilpotent LO-3 groups was studied by Zomorrodian. We study metabelian LO-3 groups and obtain a number of results about their structure. Finally, the integers that occur as the symmetric genus of groups in these classes have density zero in the positive integers. (Received September 16, 2013)