TECHNICAL NOTE

*INEXPENSIVE PUBIS ELECTRODES
FOR DELIVERING SHOCK TO PIGEONS¹*

A widely used device for delivering shock to pigeons has been the implanted pubis electrode, first developed by Azrin (1959). With this technique, gold wire, about 2 in. in length, is looped around each pubis bone and connected to the shock source by means of a harness and retractile cable arrangement.

Two disadvantages can be noted in this arrangement. The first is a build-up of bone-crust around the electrodes, which results in a gradual increase in the internal resistance of a bird. While this can be dealt with by moving the electrode and scraping away the crust, repeated attempts of this can cause the gold to break. The second is the expense of the gold wire—approximately \$20/ft—a prohibitive amount if a large number of pigeons are to be used in an experiment.²

In the search for a less expensive substitute, 20-gauge stainless steel wire (0.032 in. O.D.) has been tried in over 30 pigeons. Over a period as long as six

months, most of the pigeons showed little or no change in internal resistance. Although it is difficult to say whether this is a real improvement over the gold wire, it certainly does not appear to be any worse than the gold. Given the cost difference, there seems to be little reason for using gold.

While the 20-gauge stainless steel wire seemed to be less flexible than its gold counterpart, this did not prove to be a major disadvantage, since it was still easily bent and twisted for attachment to the harness. It is also possible that thinner, more flexible wire could be obtained.

The wire used was Type 304 Stainless Steel, obtainable from Harbour Industries, P.O. Box 188, Shelburne, Vermont 05482, and the cost was \$2 for 100 ft. This amount will allow for implantation of 200 to 300 pigeons, at considerably less cost than if gold wire were used.

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²It has since been pointed out, however, that 0.025-in. 24-K gold wire has been obtained for less than \$5/ft. from Hagstoz & Son, Philadelphia, Pennsylvania.

REFERENCE

- Azrin, N. H. A technique for delivering shock to pigeons. *Journal of the Experimental Analysis of Behavior*, 1959, 2, 161-163.

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