

GENERAL NOTES

Longevity of Herculite Leg Jess Color Markers on the Prairie Falcon (*Falco mexicanus*).—A study of Prairie Falcon population dynamics (Platt, in prep.) was conducted during the summers of 1976 to 1978 in Weld County, CO. To indicate yearly survival rates of individual falcons, a color marker that would be permanent and not impair survival was necessary. Various techniques are summarized by Marion and Shamis (*Bird-Banding*, **48**: 42–61, 1977). Due to the restriction of not duplicating the type or color of markers already in use, the Bird Banding Laboratory could not approve an individual color-marking scheme. The only marker type available for use was the leg jess type (Downing and Marshal, *J. Wildl. Manage.*, **23**: 223–224, 1959) which was to be extended no further than 7.62 cm from the leg. Attachment was with two 3.18-mm (depth 1 cm) aluminum pop-rivets and four washers. Herculite (Herculite Protective Fabrics Corp., Newark, NJ), a nylon meshwork coated with plastic, was cut into rectangles (6.5 × 6.5 cm for males and 7.0 × 6.5 cm for females) and folded into thirds to increase thickness and to extend the expected life of the marker. Lock-on aluminum leg bands (USFWS) were attached to the opposite leg of each of the 52 individuals trapped at their nest sites.



FIGURE 1. Juvenile male Prairie Falcon with black color marker and USFWS lock-on aluminum leg band. Photograph by Rick Williams.

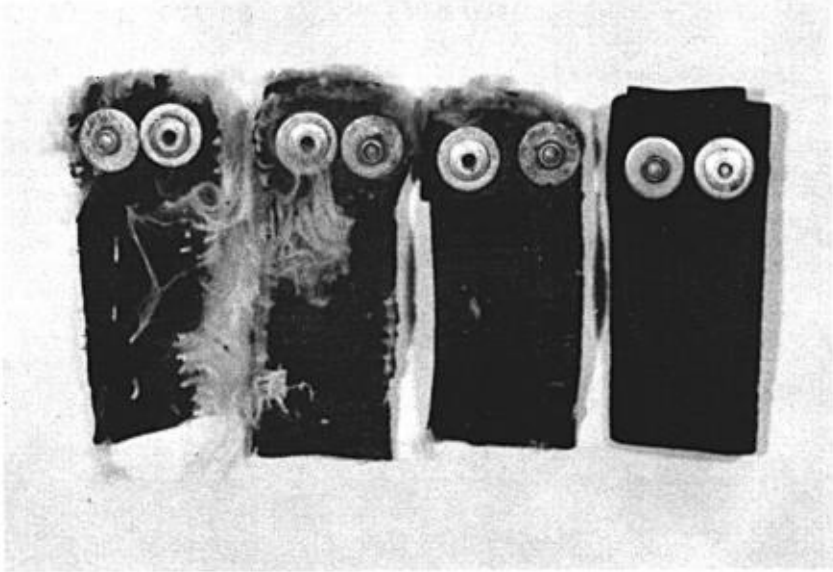


FIGURE 2. Degrees of deterioration in leg markers worn by female Prairie Falcons for a period of one year before being removed. Marker on the extreme right was never used.

Prairie Falcons trained in falconry and fitted with leg jesses often receive both intra- and interspecific aggression from other raptors which apparently mistake the jesses for captured prey and give pursuit, often attempting to grasp them. To reduce any possible decreased survival from increased competition, the markers used in this study were extended from the leg only far enough for them to be secured (Fig. 1). This length of marker was only visible at short distances with binoculars.

Five marked individuals, marked for a period of one year, were retrapped and marker-wear noted. In three instances (60%) deterioration was extensive (Fig. 2). The wear was presumably caused by a biting and pulling action exerted from the mandibles of the falcons. Two individuals (18%) apparently removed their color markers by the end of two years. They were tentatively identified by individual behavioral characteristics and by aluminum bands on the correct leg (left versus right).

The longevity of this type of color leg marker may be extremely limited and three to four years is probably a reasonable estimate of their permanence. Nesbitt (*Bird-Banding*, 50: 159, 1979) has investigated the durability of Herculite and other materials. This technique consequently, may have limited usefulness in long term studies of raptors unless a more durable material is used. Investigations conducted on a short term basis, however, may find it useful.

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