Methods used in the past for holding or restraining raptorial birds impose limitations on what procedures may be performed on the bird. Different sizes and combinations of cans used in some banding operations (F. Hamerstrom, D. Evans, personal communications) were not easily transported in the field, and several sizes were necessary to accommodate different species. Additionally, raptors must be removed from the can to perform most procedures other than banding. Though diurnal raptors were generally calm after being placed in a can, owls (Strigiformes) often continued to struggle. Nylon stockings were not strong enough to contain many raptors, and, again, the birds would have to be removed for many procedures. Fredrickson (Bird-Banding 41[3]:242–243, 1970) devised a plastic coated nylon strip fastened by self-adhering Velcro for use with ducks (Anatidae). Evans and Kear’s (J. Wildl. Manage. 36[4]:1265–1267, 1972) modification of this device eliminated much slippage. To be effective, however, the jacket had to be entirely in place. This did not allow access to most of a bird’s body. None of the above techniques contained the potentially dangerous feet of birds of prey, nor did they permit certain parts of the body to be restrained while others were left unbound. The use of self-adhesive elastic wrap overcame most of these problems and greatly facilitated the holding and handling of raptors.

The material found to be most satisfactory and readily available was Vetrap® Brand Bandaging Tape (Animal Care Products, 3M Co., St. Paul, Minn. 55101). Vetrap® comes in rolls 2,286 mm long and 96 mm wide. One roll weighs approximately 35 g. The material is easily cut to different lengths and widths. This wrap is self-adhesive and therefore may be tightened and secured wherever necessary. The self-adhesive property tends to eliminate most of the slippage encountered with more traditional elastic wraps such as the “Ace” type bandage. No sticky or tacky adhesives are used. The wrap adheres to itself, but not to feathers, skin, soil, and leaf litter, for example. No clips or pins are necessary to hold the wrap in place or to secure the ends.

Once the bird is removed from the trap its wings should be folded to its sides. The wrap is prepared by unrolling about 45 cm and laying it on a flat surface. Then the bird, wings folded, is placed on its back, in the middle of the length, so the wrap, when brought over the front of the bird, will fall across the bird’s breast. The free end should be brought over the bird’s breast and tucked between the bird’s back and the remaining wrap lying on the ground. Next, the bird is wrapped by unrolling wrap as needed. After one or two wraps around the breast, the wrap should be brought up over the alula (carpals) of the wing, back over the breast, around the back, and up over the other alula. This will prevent the bird from working its wings anteriorly and pushing the wrap posteriorly off the breast. Throughout the wrapping procedure the wrap should be stretched so it fits snugly about the bird. The manufacturers of Vetrap® suggest using about one-third of the elasticity. The elasticity of the wrap enables the bird to breathe easily despite the tight fit. After the wrists are covered, the bird is wrapped in a posterior direction to cover the abdomen and primaries. The legs should be extended posteriorly and wrapped in this position, otherwise the bird may extend them, thus allowing the wrap to slip. The legs and feet are wrapped last.

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The wrap is stretched tightly around the legs and feet and secured to itself all the way around. The feet should be allowed to close into a "fist" if the bird will do this, and wrapped in the closed position to eliminate grasping. The method outlined above is recommended; however, if the handler has difficulty controlling the feet, he may wish to use part of another roll to wrap the legs and feet before wrapping the rest of the bird. One roll of wrap is generally sufficient for birds up to the size of male great-horned owls (Bubo virginianus) or female red-tailed hawks (Buteo jamaicensis).

Generally birds become quite calm after having been "hooded," wrapped, and placed on their backs, but the wrap should be checked frequently if the bird continues to struggle. Additionally, one should check to make sure respirations are regular. Healthy raptors have been held up to 24 hours while wrapped and placed on their backs. However, many birds, such as those stressed by capture and/or suffering from disease or injury, may not be able to respire as efficiently in this position, and it is suggested that they be placed on their side or abdomen.

The self-adhesive wrap allows one person to secure a bird and free both hands for subsequent procedures. This can be very helpful when handling raptors which are strong and potentially dangerous. The techniques described have been used on birds of prey ranging in size from American kestrels (Falco sparverius) to bald eagles (Haliaeetus leucocephalus). It could no doubt be used with any avian species.

Wrapped birds are easily weighed on balances. The technique provides an excellent means of securing birds during induction of anesthesia (Pierson and Fuller, unpublished data). The wrap will "cloud" radiographs and reduce resolution, but generally it can be used to restrain most of the bird while a wing or leg is X-rayed (P. Redig, personal communication). The wrap is valuable in post-operative cases when a bird or part of a bird needs to be restrained. It is strong, does not rip easily, and may be used many times without losing elasticity or adhesiveness.

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