KILLDEER WITH AN EXTRA RECTRIX

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On 2 April 1994, during the course of banding operations, we trapped an adult female Killdeer (*Charadrius vociferus*) that was incubating at a nest with four eggs. While examining her plumage we discovered that she had an extra rectrix (tail feather) number two on the left side (Figure 1), giving her an asymmetrical complement of 13 rectrices. In general, the plumage of birds is remarkably symmetrical. Not only are the flight feathers usually symmetrical in number, shape, size, color, and position in the wing or tail, but their replacement through the process of molt is symmetrical as well. For example, when rectrix number three on the right side is molted, rectrix number three on the left side is generally molted simultaneously. Such symmetry would maximize balance and symmetry of feather function during flight. It seems likely that under most circumstances such an extra rectrix as reported here would cause the bird no problem. However, subtle movements of the rectrices, as a result of contraction or relaxation of muscles intimately associated with each feather, facilitate twisting, turning, and air speed change in flight. Such could be critical during pursuit by a potential predator and it is possible that an extra rectrix could then be detrimental to the bird.

In the case of this extra rectrix, the follicles of the two number two rectrices on the left side were much closer to one another than either was to its nearest neighbor on the other side. The cause of such an abnormality is not clear. Perhaps at some point during the embryological development of the feather follicles, or perhaps as a result of inappropriate healing following an injury, the "number two right" rectrix follicle split to become to separate follicles.

Although Figure 1 suggests that the central rectrices were displaced to the right, during this bird's distraction display which was used in an effort to lure us from the nest, the central rectrices were the ones most intimately drug along the ground. This is typical of Killdeer and is evidenced by the similar, more excessive wear at the tip of rectrices number one right and left.

Figure 1. The tail of the female Killdeer with an extra rectrix number two on the left side. Rectrices are numbered from the innermost pair (those lacking the white tips in this case) to the outermost. Note not only the extra tail feather, but also the symmetry of color pattern in members of each pair.