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Rape Among Mallards

Barash's report (1) on rape in mallards (*Anas platyrhynchos*) is an interesting attempt to investigate the selective basis of a male's strategies in response to attempted rape of his mate. A fair appraisal of the significance of Barash's conclusions requires consideration of the following points.

1) Barash's birds were free-flying and unmarked, which introduces uncertainties into the interpretation of complex events for which knowing the identity of individuals is essential.

2) Urban mallard populations contain birds derived in varying degrees from domesticated and game-farm stocks [for example (2)] in which behavior is probably altered to some unknown degree by selection for domestication. Also, artificial crowding (as in city parks) can cause gross disruption of breeding activities in mallards (3), but Barash gave no information on the degree of crowding of his birds.

3) Barash reported rape behavior during January to May of three different years, yet did not give local dates of egg-laying. Such knowledge is crucial for

evaluating the significance of raping in the fertilization of eggs, because mallard sperm remain viable for only 7 to 14 days after insemination (4). This is our most serious criticism of the study.

4) Barash assumed that the success of rapists can be ascertained by the presence or absence of male postcopulatory displays, but our observations on mallards in flight pens (5) contradict this. We have found that males rarely perform displays after apparently successful rapes, and the same was true in our studies of two closely related species, green-winged teal (*Anas crecca*) and northern pintail (*Anas acuta*) (6). Indeed, it seems that selection would favor rapists who omit these displays. Why should a rapist advertise his success if this promotes sperm competition (through forced pair copulation) by the female's mate?

5) Barash's comparison of mallards and bluebirds seems of limited value because of the great differences between these species in all aspects of pair formation, territoriality, and general breeding biology.

We agree with Barash that the possible selective consequences of raping behav-

ior in ducks are extremely interesting, and we urge that the behavior be studied and interpreted as carefully as possible. Generalizing from the behavior of urban mallards to natural wild populations must be done cautiously, if at all.

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