Mol Ecol. 2003 Jan;12(1):229-36.

A molecular genetic analysis of the communal nesting of the ostrich (Struthio camelus).

Kimwele CN[1], Graves JA.

Abstract

The ostrich breeding system is complex and unique; communal clutches are laid by several females, although only one female, the major female, and the resident territorial male provide parental care. More eggs are laid in the nest than can be incubated and the major female ejects surplus eggs from the incubated central clutch. Microsatellite markers were used to analyse the parentage of communal nests in Nairobi National Park. This revealed that major females contributed a disproportionate number of fertile eggs to the central, incubated clutch and that multiple paternity and maternity within a nest were common; 68.9% of all incubated eggs on a nest were not parented by both the resident territorial male and the major female of that nest. All the males fertilized eggs on the clutches of neighbouring males. Unexpectedly, every major female with her own nest was also simultaneously a minor female with incubated eggs on neighbouring clutches. The relatedness between females laying in the same nest was not significantly different from the population average and significantly less than that between chicks hatched from the same nest.