

Shorebirds more likely to divorce after successful breeding

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Females are more likely than males to leave the nest and breed again with another mate. Credit vinx83

An international team of scientists studying shorebirds, led by the University of Bath, has found that successful plover parents are more likely to divorce after nesting than those that did not successfully breed, in contrast to most other bird species which tend to split up after nest failure.

The researchers studied the mating behavior of eight different [species](#) of Charadrius plovers, covering 14 populations in different locations across the world.

These shorebirds tend to lay two to four eggs per [nest](#) and can have up to four breeding attempts per season.

Plover chicks mature quickly and fly the nest around a month after hatching; in most plover species both [parents](#) care for the hatchlings, but in some species either parent can desert the nest to breed again with a new mate.

Surprisingly, the researchers found that pairs that successfully raised chicks were more likely to divorce, whereas unsuccessful pairs tended to stick together and try breeding again.

Females were more likely to desert the nest than males, and those that did often produced more offspring within a season than parents that retained their mate.

Plovers that divorced also dispersed across greater distances between breeding attempts to look for new mates.

The findings, published in the journal *Scientific Reports*, suggest that a range of factors including the adult sex ratio, the length of breeding season and adult lifespan affect the fidelity and parenting behavior of these birds, rather than simply being due to the species.

Naerhulan Halimubieke, Ph.D. student at the Milner Center for Evolution at the University of Bath and first author of the paper, said: "Our findings go against what you'd intuitively expect to happen—that divorce would be triggered by low reproductive success. Interestingly, we found that mate fidelity varied amongst different populations of the

same species—for example, Kentish plovers in Europe and China are serial polygamists and are migratory, whereas those found on Cape Verde are exclusively monogamous. This shows that mating behavior is not simply down to which species they belong, but that other factors affecting the population are also important, such as ratio of males to females and temperature variation of the habitat."

Tamás Székely, Professor of Biodiversity at the Milner Center for Evolution, said: "Our previous work has shown that in populations where there are more females than males, the female tends to leave the nest after breeding to make another nest with a new mate. Since plover chicks don't need much work in bringing them up, one of the parents can free themselves from the nest early and go on to breed elsewhere. Females are more likely to leave their partners if the [population](#) is skewed towards males, because they have a greater choice of potential partners and so are more likely to increase their reproductive success by breeding with another mate. More research is needed to fully understand how factors such as the adult sex ratio and the climate of the populations affects the breeding behavior of these birds."

More information: Naerhulan Halimubieke et al. Successful breeding predicts divorce in plovers, *Scientific Reports* (2020). [DOI: 10.1038/s41598-020-72521-6](#)

Provided by University of Bath

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