



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)


Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/3354>

Title:	Anisogamy selects for male-biased care in self-consistent games with synchronous matings
Authors:	Jadhav, Vivek (/jspui/browse?type=author&value=Jadhav%2C+Vivek)
Keywords:	Anisogamy Mating synchrony Model self-consistency Parental care Parental investment hypothesis sex roles
Issue Date:	2020
Publisher:	Society for the Study of Evolution
Citation:	Evolution, 74(6), pp.1018-1032.
Abstract:	We reexamine the influential parental investment hypothesis proposed by Trivers for the causal relationship between anisogamy and widespread female-biased parental care. We build self-consistent versions of Maynard Smith's simple evolutionary game between males and females over parental care, and incorporate consequences of anisogamy for gamete production and its trade-off with parental care, and for patterns of mate limitation. As male mating opportunities are limited by females, frequency-dependent selection acts on male strategies. Assuming synchrony of matings in the population, our analytical models find either symmetric sex roles or male-biased care as an evolutionarily stable strategy (ESS), in contrast to Trivers' hypothesis. We simulate evolution in asynchronously mating populations and find that diverse parental roles, including female care, can be ESS depending on the parameters. When caring males can also remate, or when females can increase the clutch size by deserting, there is stronger selection for male-biased care. Hence, we argue that the mating-caring trade-off for males is neither a necessary consequence of anisogamy nor sufficient to select for female-biased care. Instead, the factors excluded from our models—costly competitive traits, sexual selection, and partial parentage—may be necessary for the parental investment hypothesis to work
Description:	Only IISERM authors are available in the record.
URI:	https://onlinelibrary.wiley.com/doi/abs/10.1111/evo.13969 (https://onlinelibrary.wiley.com/doi/abs/10.1111/evo.13969) http://hdl.handle.net/123456789/3354 (http://hdl.handle.net/123456789/3354)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
need to add pdf....odt (/jspui/bitstream/123456789/3354/1/need%20to%20add%20pdf....odt)		8.12 kB	OpenDocument Text	View/Open (/jspui/bitstream/123456789/3354/1/need%20to%20add%20pdf....odt)

Show full item record (</jspui/handle/123456789/3354?mode=full>)

 (</jspui/handle/123456789/3354/statistics>)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.