

Scarcity of hosts for gregarious parasitoids indicates an increase of individual offspring fertility by reducing their own fertility

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Manuscript Source: <https://www.biorxiv.org/content/10.1101/2021.03.05.434037v1>

Manuscript Authors: Alena Samková, Jan Raška, Jiří Hadrava & Jiří Skuhrovec

Features of the Sentence Audit:

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- Depending on the source of the input text, the Sentence Audit may contain occasional html artefacts that are parsed as sentences (E.g. "Download figure. Open in new tab").
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Contact Information:

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All queries, feedback or suggestions are also very welcome.

Research Paper Sections:

The sections of the research paper input text parsed in this audit.

[illegible]

Title **Scarcity of hosts for gregarious parasitoids indicates an increase of individual offspring fertility by reducing their own fertility**

S1 [001] ABSTRACT

S1 [002] The gregarious parasitoid strategy allows multiple larvae to complete development in a single host due to their tolerance and/or lower mobility and thus flexibly adjust their reproductive potential amidst changing environmental conditions.

The gregarious parasitoid strategy allows multiple larvae ...
... to complete development ...
... in a single host ...
... due to their tolerance ...
... and/or lower mobility ...
... and thus flexibly adjust their reproductive potential amidst changing environmental conditions.

S1 [003] Reproductive success is generally measured as the number of each mother's offspring.

Reproductive success is generally measured ...
... as the number ...
... of each mother's offspring.

S1 [004] We propose that with scarcity of host, for gregarious parasitoids is important the view on the fertility not only of a mother but also of her offspring (F1 generation).

We propose ...
... that with scarcity ...
... of host, ...
... for gregarious parasitoids is important the view ...
... on the fertility not ...
... only of a mother ...
... but also ...
... of her offspring ...
... (F1 generation).

S1 [005] Due to the body size-fitness correlation, each female deliberately adjusts the clutch size, determining the offspring body size and their reproductive potential.

Due ...
... to the body size-fitness correlation, ...
... each female deliberately adjusts the clutch size, ...
... determining the offspring body size ...
... and their reproductive potential.

S1 [006] In our study, using *Anaphes flavipes* as a model species, we showed that under a limited number of hosts, the females reduced their fertility.

In our study, ...

... using *Anaphes flavipes* ...
... as a model species, ...
... we showed ...
... that under a limited number ...
... of hosts, ...
... the females reduced their fertility.

S1 [007] We propose that the lower fertility of mothers can cause higher fertility in the F2 generation using a larger offspring body while halving fertility.

We propose ...
... that the lower fertility ...
... of mothers can cause higher fertility ...
... in the F2 generation ...
... using a larger offspring body ...
... while halving fertility.

S1 [008] The females increase their individual offspring's fertility by reducing their own fertility.

The females increase their individual offspring's fertility ...
... by reducing their own fertility.

S1 [009] Moreover, we showed that with a scarcity of hosts, the mothers increased the number of their female offspring, and thus, they obtained more offspring in the F2 generation.

Moreover, ...
... we showed ...
... that with a scarcity ...
... of hosts, ...
... the mothers increased the number ...
... of their female offspring, ...
... and thus, ...
... they obtained more offspring ...
... in the F2 generation.

S1 [010] Additionally, other costs and benefits of the gregarious strategy in relation to superparasitism were tested and discussed.

Additionally, ...
... other costs ...
... and benefits ...
... of the gregarious strategy ...
... in relation ...
... to superparasitism were tested ...
... and discussed.

S2 [012] Parasitoids provide a unique opportunity for studies of the evolution of reproductive behaviour¹.

Parasitoids provide a unique opportunity ...
... for studies ...
... of the evolution ...
... of reproductive behaviour¹.

S2 [013] In particular, gregarious parasitoids with more tolerant and/or less mobile larvae developing together in one host are suitable models^{2,3}.

In particular, ...
... gregarious parasitoids ...
... with more tolerant ...
... and/or less mobile larvae developing together ...
... in one host are suitable models^{2,3}.

S2 [014] Some combinations of the number and sex ratio of offspring developing in a single host are more advantageous than others^{4,5} and are favoured by natural selection to maximize individual fitness⁶.

Some combinations ...
... of the number ...
... and sex ratio ...
... of offspring developing ...
... in a single host are more advantageous ...
... than others^{4,5} ...
... and are favoured ...
... by natural selection ...
... to maximize individual fitness⁶.

S2 [015] After finding a host, the female parasitoid decides not only on the sex (haplodiploid sex determination⁷) and the number of offspring deposited into a single host but also, in many cases of parasitoids, on their ultimate body size and fertility⁸.

After finding a host, ...
... the female parasitoid decides not ...
... only on the sex ...
... (haplodiploid sex determination⁷) ...
... and the number ...
... of offspring deposited ...
... into a single host ...
... but also, ...
... in many cases ...
... of parasitoids, ...
... on their ultimate body size ...
... and fertility⁸.

S2 [016] Because parasitoids larval development is dependent strictly on the nutrients contained in one host⁹, the amount of food obtained during larval development positively correlates with their body size^{10,11,12} and their body size determines their fertility^{11,13}.

Because parasitoids larval development is dependent strictly ...
... on the nutrients contained ...

... in one host⁹, ...
 ... the amount ...
 ... of food obtained ...
 ... during larval development positively correlates ...
 ... with their body size^{10,11,12} ...
 ... and their body size determines their fertility^{11,13}.

S2 [017] Under optimal conditions, such as a sufficient number of hosts and a sufficient number of eggs a female has available¹⁴, she can choose the optimal clutch size per single host without a trade-off between the clutch size and the offspring body size (Samková et al. 2019a).

Under optimal conditions, ...
 ... such as a sufficient number ...
 ... of hosts ...
 ... and a sufficient number ...
 ... of eggs a female has available¹⁴, ...
 ... she can choose the optimal clutch size ...
 ... per single host ...
 ... without a trade-off ...
 ... between the clutch size ...
 ... and the offspring body size ...
 ... (Samková et al. 2019a).

S2 [018] Even distribution of offspring among a sufficient number of hosts ensures a large offspring body size and their subsequent high fertility^{8, 15}.

Even distribution ...
 ... of offspring ...
 ... among a sufficient number ...
 ... of hosts ensures a large offspring body size ...
 ... and their subsequent high fertility^{8, ...}
 ... 15.

S2 [019] With a scarcity of hosts, the parasitoids female faces a trade-off between the clutch size and the body size of the offspring, and she chooses a reproductive strategy of smaller offspring¹⁵.

With a scarcity ...
 ... of hosts, ...
 ... the parasitoids female faces a trade-off ...
 ... between the clutch size ...
 ... and the body size ...
 ... of the offspring, ...
 ... and she chooses a reproductive strategy ...
 ... of smaller offspring¹⁵.

S2 [020] In the natural environment, the parasitoids female faces intraspecific and interspecific competition for hosts^{16,9,17}.

In the natural environment, ...
 ... the parasitoids female faces intraspecific ...
 ... and interspecific competition ...
 ... for hosts^{16,9,17}.

End of Sample Audit

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