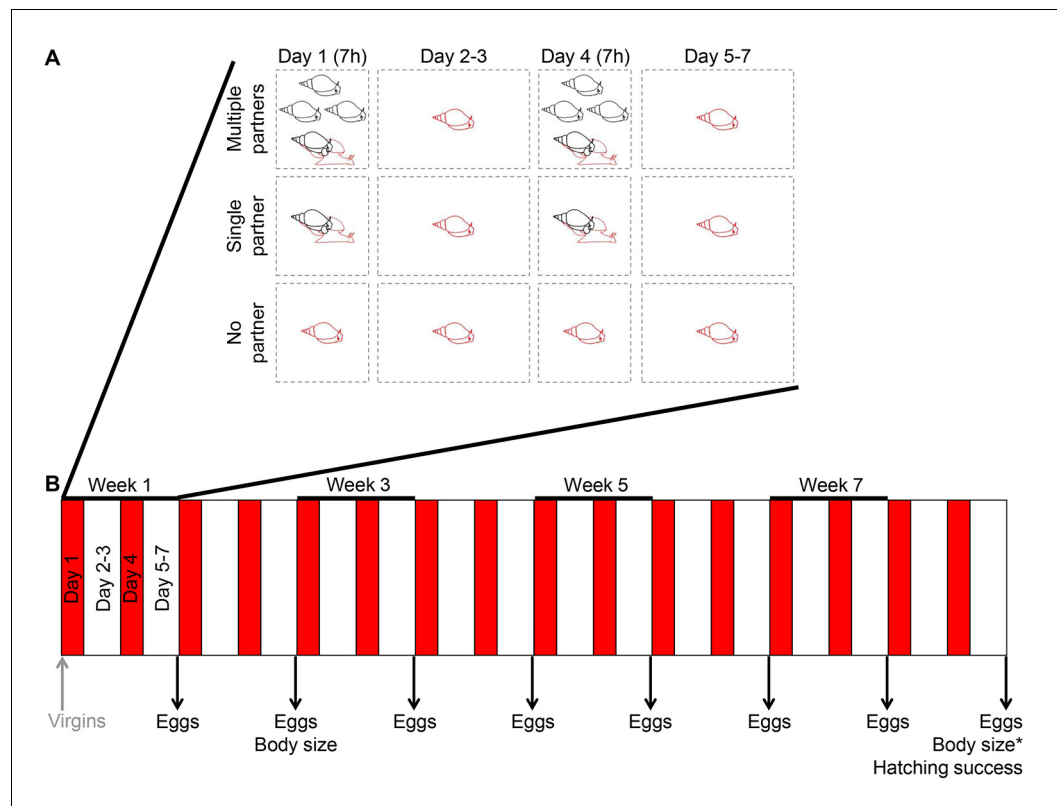


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## Figures and figure supplements

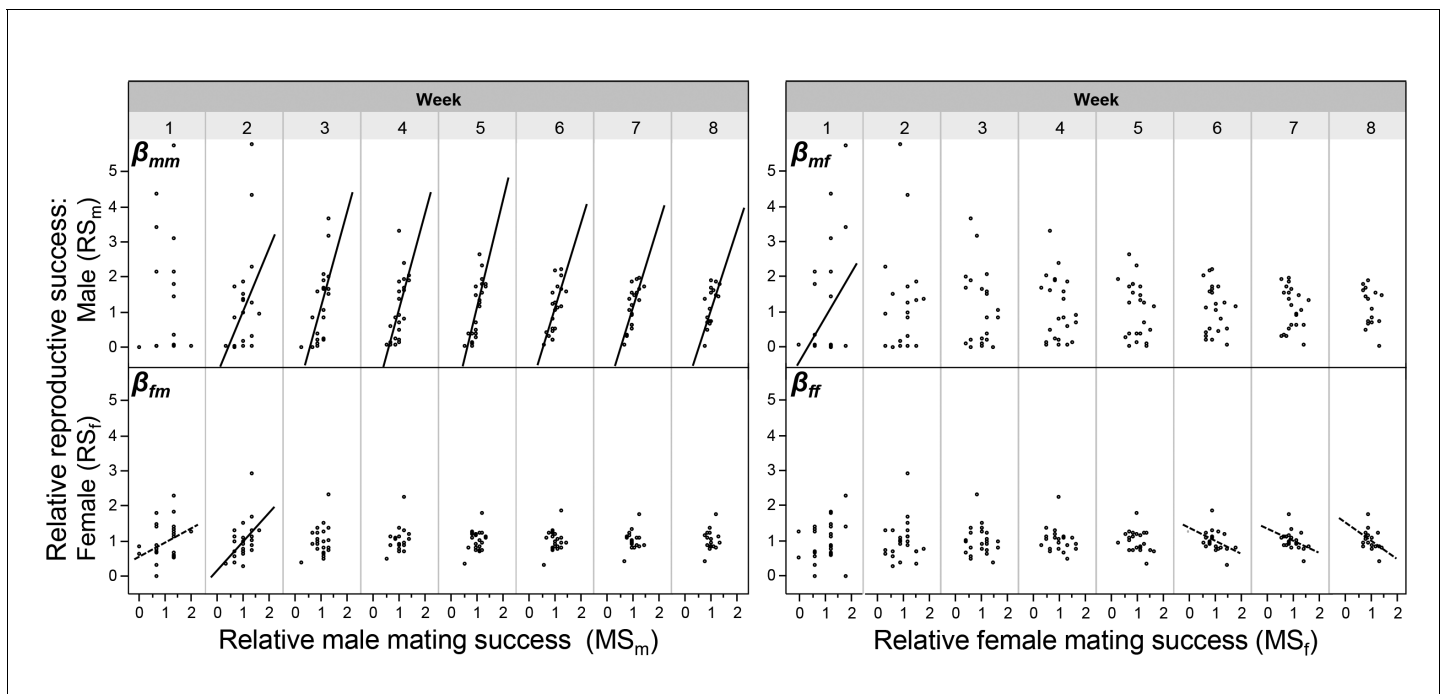
Sexual selection gradients change over time in a simultaneous hermaphrodite

**Jeroen NA Hoffer et al**



**Figure 1.** The experimental setup used. (A) The schematic overview shows the three different treatments that the virgin animals were subjected to for the first week. On Day 1 and 4, animals were allowed to mate for seven hours (7h) with either four different partners (Multiple partners treatment), one partner (Single partner treatment), or no partner (No partner treatment). The focal individual, which had a different microsatellite genotype from its partners, is indicated in red. In between the mating trials, all the animals were kept in isolation, but for simplicity only the focals are shown here. (B) The treatments shown in panel A were repeated over the course of the experiment, as indicated by the red bars in the timeline of the eight-week experiment. This also shows that eggs were collected at the end of each experimental week, that body sizes were measured twice, and that a set of eggs that was laid at the end of the experiment was allowed to develop in order to determine hatching success.

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**Figure 2.** The relationships between male and female mating success and reproductive success. The relationships are shown for every week of the experiment. The within-sex and cross-sex sexual selection gradients are based on bivariate regressions of either reproductive success on mating success ( $\beta_{mm}$ ,  $\beta_{ff}$ ,  $\beta_{mf}$ ,  $\beta_{fm}$ ). Significant slopes ( $p < 0.05$ ) are indicated with a solid fitted line, a trend ( $p < 0.10$ ) is indicated with a dashed line. As shown in **Figure 2—source data 3**, the slopes of different weeks do not significantly differ from each other.

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The following source data is available for figure 2:

**Source data 1.** The calculated values and their confidence interval (CI) for the opportunity for selection ( $I$ ) and sexual selection ( $I_s$ ) for both sexual roles, indicated with subscript m or f, over the weeks.

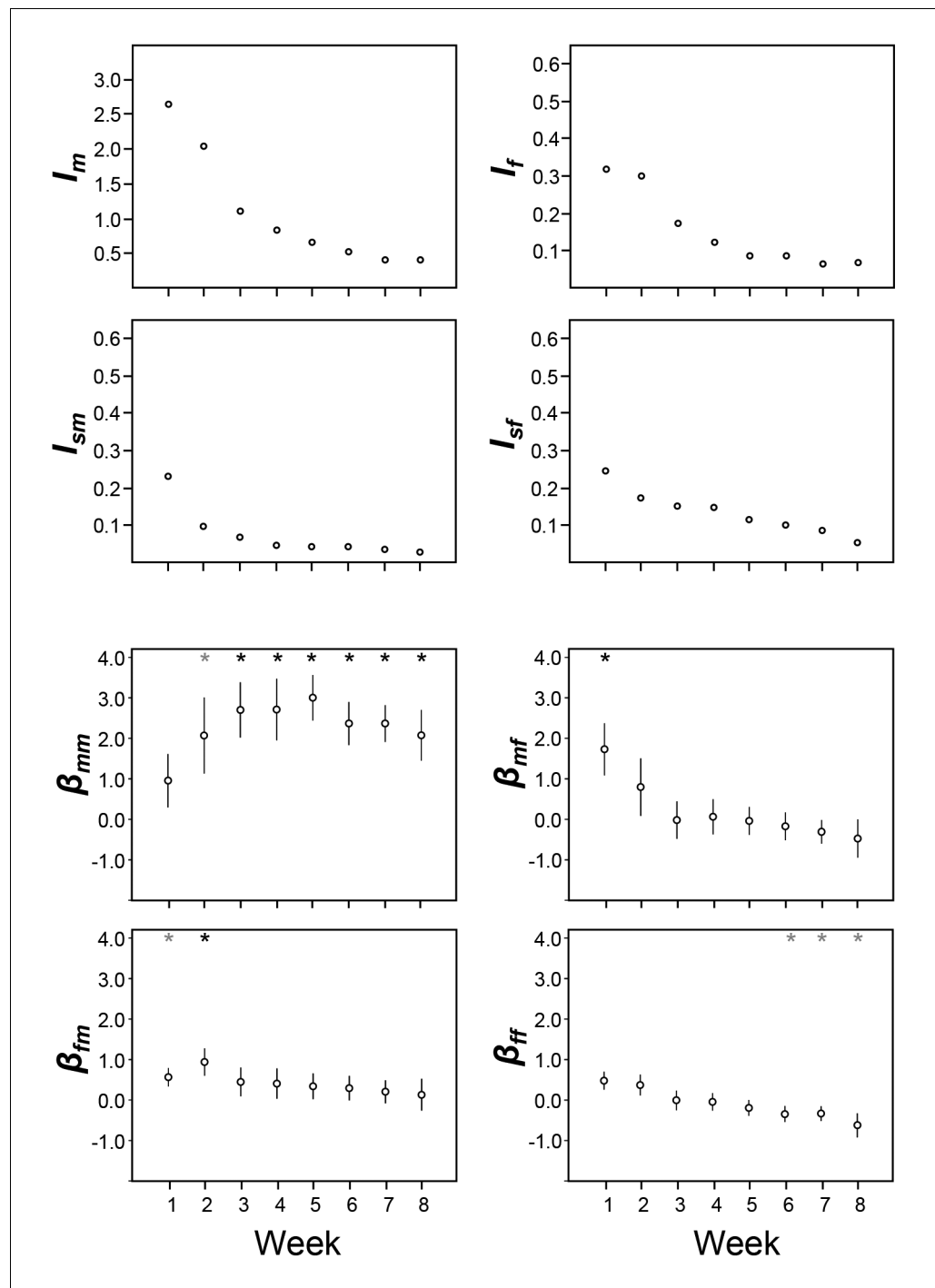
DOI: [10.7554/eLife.25139.005](https://doi.org/10.7554/eLife.25139.005)

**Source data 2.** Slope comparisons between weeks for all the significant sexual selection gradients shown in **Figures 2** and **3**.

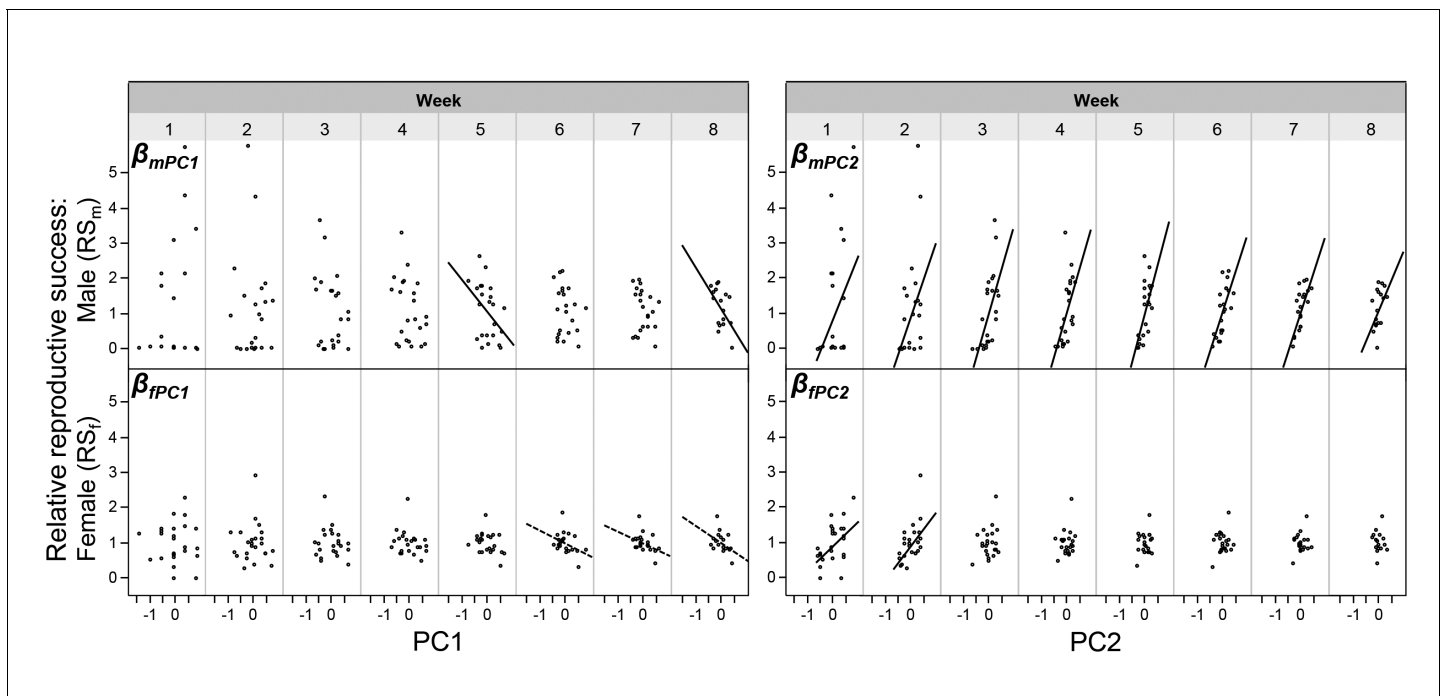
DOI: [10.7554/eLife.25139.006](https://doi.org/10.7554/eLife.25139.006)

**Source data 3.** Slope and confidence interval of the correlations between the different sexual selection measures.

DOI: [10.7554/eLife.25139.007](https://doi.org/10.7554/eLife.25139.007)



**Figure 2—figure supplement 1.** I-values and gradient values are shown over time, calculated for every week of the experiment. The values are shown for the relative cumulative data. For the gradients, means and standard deviations are depicted and significant slopes are indicated with an asterisk. See [Figure 2—source data 1](#); [Figure 2—source data 3](#), respectively, for the confidence intervals of the I and  $\beta$ -values.  
DOI: [10.7554/eLife.25139.008](https://doi.org/10.7554/eLife.25139.008)



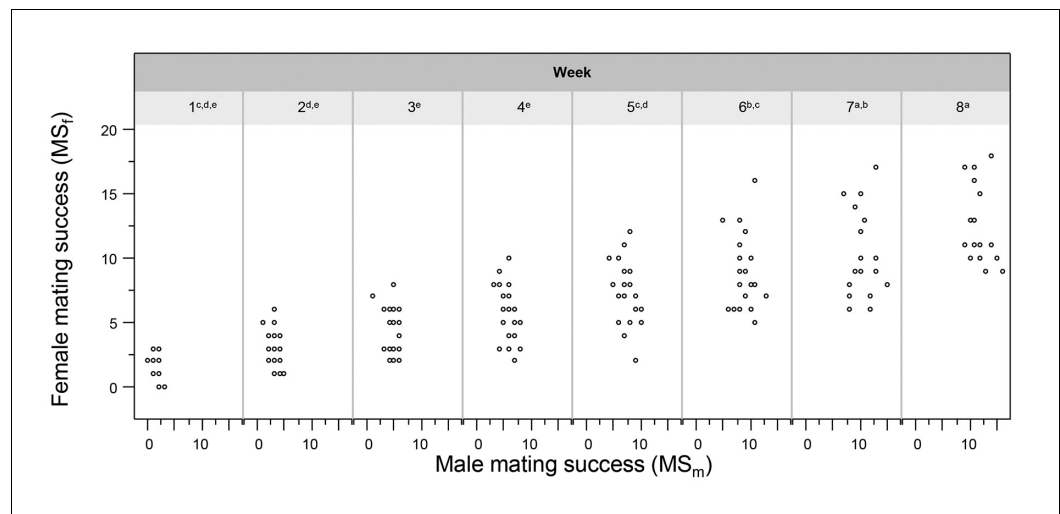
**Figure 3.** The relationships between the PCA values (based on mating success) and reproductive success. The relationships are shown for every week of the experiment. The within-sex and cross-sex gradients are based on bivariate regressions of either reproductive success on principal components ( $\beta_{mPC2}$ ,  $\beta_{fPC2}$ ,  $\beta_{mPC1}$ ,  $\beta_{fPC1}$ ). PC1 represents the sexual bias (the relative difference between  $MS_m$  and  $MS_f$ ); PC2 represents the overall mating activity (the correlation component between  $MS_m$  and  $MS_f$ ). Significant slopes ( $p < 0.05$ ) are indicated with a solid fitted line, a trend ( $p < 0.10$ ) is indicated with a dashed line. As shown in **Figure 2—source data 3**, in italics, the slopes of different weeks do not significantly differ from each other.

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The following source data is available for figure 3:

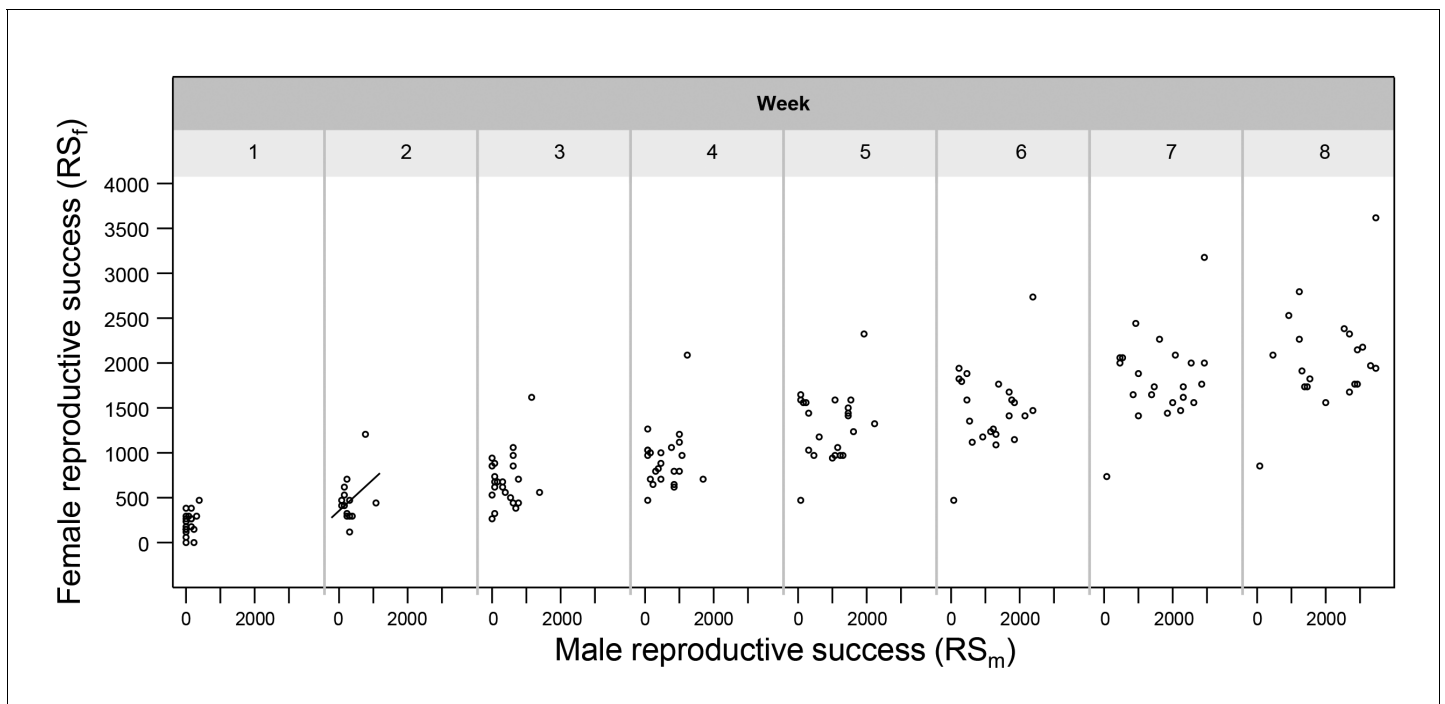
**Source data 1.** Results of the principal component analysis (PCA) for each week of the experiment.

DOI: [10.7554/eLife.25139.010](https://doi.org/10.7554/eLife.25139.010)



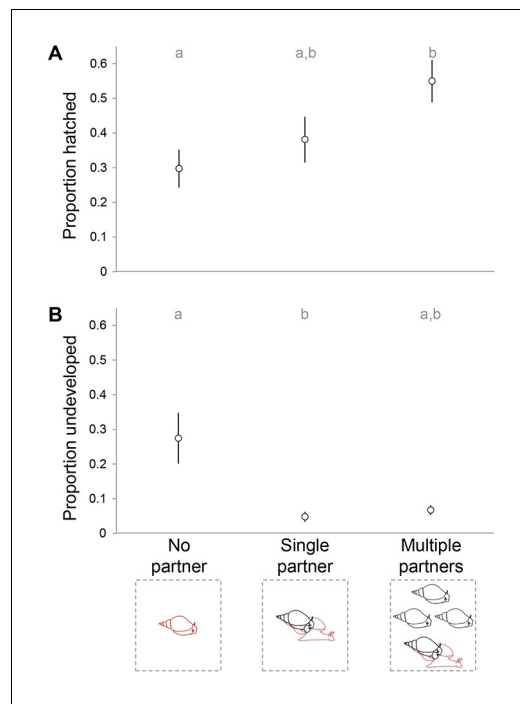
**Figure 4.** The relationship between male and female mating success. The relationship is shown for every week of the experiment. The absence of fitted lines indicates the absence of significance between the individuals' male and female mating success. The superscripted significance letters indicated with the week numbers indicate the Tukey post-hoc differences between weeks.

DOI: [10.7554/eLife.25139.011](https://doi.org/10.7554/eLife.25139.011)



**Figure 4—figure supplement 1.** The relationship between male and female reproductive success. The relationship is shown for each week of the experiment and the single significant slope ( $p < 0.05$ ) is indicated with a solid fitted line.

DOI: [10.7554/eLife.25139.012](https://doi.org/10.7554/eLife.25139.012)



**Figure 5.** Hatching success of eggs collected at the end of the experimental period. The proportion of undeveloped (A) and hatched (B) eggs is shown for each of the three treatments. The different letters indicate significant differences based on Wilcoxon multiple comparisons ( $p < 0.05$ ).

DOI: [10.7554/eLife.25139.013](https://doi.org/10.7554/eLife.25139.013)