

Supplementary Material has been updated in the original article. All the panels in these figures that pertain to models other than the SSS remain unchanged.

Using the correct equation for the SSS does not change our primary inference that the SSS is less exible (i.e., has lower geometric complexity) than the baseline Holling-Real Type III (H3R) model and most other prey-dependent three-parameter models. However, the corrected SSS model has similar (rather than much lower, as previously stated) exibility compared to the

other least-exible Abrams II (A2) model. Furthermore, the correction makes the effects of different experimental designs on the exibility of the SSS more consistent with the effects seen for the other prey-dependent models: for both a golden-ratio (Figure 5) and an arithmetic spacing (Figure S8) of prey and predator abundances, (i) increasing maximum prey abundance causes the difference between G_{SSS} and G_{H3R} to decrease (rather than increase, as previously stated), with (ii) variation in maximum predator abundance having a weak effect on their

FIGURE 5

As in Figure 3 but for three-parameter ($k = 3$) functional-response models. First and tenth panels: The geometric complexity G_M of the baseline Holling-Real Type III (H3R) and Beddington-DeAngelis (BD) models as a function of the experimental maximum prey and predator abundances (N_{max} and P_{max}). Other panels: The difference in G_M of the other three-parameter prey-dependent (top two rows) and ratio- and predator-dependent (bottom two rows) models relative to the baseline models. As a visual aid, models with greater geometric complexity than H2 are colored in blue while those with less geometric complexity than H2 are colored in orange.

difference (rather than a large effect, as previously stated). Further, (iii) variation in the number of prey levels has a larger effect on the difference between G_{SSS} and G_{H3R} than does variation in the number of predator levels (Figure S4) (rather than a smaller effect, as previously stated). The correction does not change the conclusion that decreasing the minimum (Figure S12) or increasing the maximum (Figure S16) expected number of eaten prey (by an order of magnitude) has little to no effect on the inferences of our primary analysis.

In Section 3.4, paragraph 2 originally read:

For the ratio- and predator-dependent models, differences to BD were more sensitive to variation in P_{max} than to variation in N_{max} . The degree to which CM, W, SBB, and AA were more exible than BD increased with increasing P_{max} , reaching a difference in geometric complexity of 0.8 information units at $P_{max} = 8$. For these models, the most equitable design therefore entailed small P_{max} regardless of N_{max} , but for TTA and RGD, for which the difference to BD decreased with increasing P_{max} , it was designs entailing large P_{max} which reduced their lower geometric complexity the least (by no less than 1.4 and up to 2.9 information units). The degree to which the prey-dependent AS, SSS and T models were less exible than H3R was also more sensitive to variation in P_{max} than in N_{max} , but the degree to which A2, HLB, and MH were less exible and the degree to which FHM was more exible was relatively insensitive to variation in P_{max} . As N_{max} increased, SSS and T became less exible than H3R, A2, HLB, MH, and AS became less in exible relative to H3R, and FHM became more exible than H3R. For BWL2, which could either be more or less exible than H3R depending on design, the most equitable designs spanned those that had the largest considered N_{max} when P_{max} was large to those that had the smallest considered N_{max} when P_{max} was small. Overall, SSS and RGD exhibited the greatest potential disparity relative to their H3R and BD baselines, respectively differing in their geometric complexity by about 13 and almost 2.9 information units for the least equitable designs. The greatest potential disparity among all other considered three-parameter models was about 11 information units and occurred between SSS and CM for large N_{max} , large P_{max} designs in favor of CM.

This has been updated to read:

For the ratio- and predator-dependent models, differences to BD were more sensitive to variation in P_{max} than to variation in N_{max} . The degree to which CM, W, SBB, and AA were more exible than BD increased with increasing P_{max} , reaching a difference in

geometric complexity of 0.8 information units at $P_{max} = 8$. For these models, the most equitable design therefore entailed small P_{max} regardless of N_{max} , but for TTA and RGD, for which the difference to BD decreased with increasing P_{max} , it was designs entailing large P_{max} which reduced their lower geometric complexity the least (by no less than 1.4 and up to 2.9 information units). The degree to which the prey-dependent AS and T models were less exible than H3R was also more sensitive to variation in P_{max} than in N_{max} , but the degree to which A2, HLB, MH, and SSS were less exible and the degree to which FHM was more exible was relatively insensitive to variation in P_{max} . As N_{max} increased, T became less exible than H3R, A2, HLB, MH, AS, and SSS became less in exible relative to H3R, and FHM became more exible than H3R. For BWL2, which could either be more or less exible than BD depending on design, the most equitable designs spanned those that had the largest considered N_{max} when P_{max} was large to those that had the smallest considered N_{max} when P_{max} was small. Overall, A2, SSS and TTA exhibited the greatest potential disparity relative to their H3R and BD baselines, respectively differing in their geometric complexity up to almost 3.8 information units for the least equitable designs. The greatest potential disparity among all other considered three-parameter models was about 4.6 information units and occurred between A2, SSS and CM for small N_{max} designs in favor of CM.

Ironically, our error emphasizes the main message of our article that (functional-response) models of equivalent parametric complexity (i.e., having the same number of free parameters, just like the first two equations of this corrigendum) can differ in their geometric complexity (i.e., their exibility) and thereby in their ability to fit data.

The authors apologise for these errors and state that they do not change the scientific conclusions of the article in any way. The original article has been updated.

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References

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