Supplementary material part 5

Information use during movement regulates how fragmentation and loss of habitat affect body size
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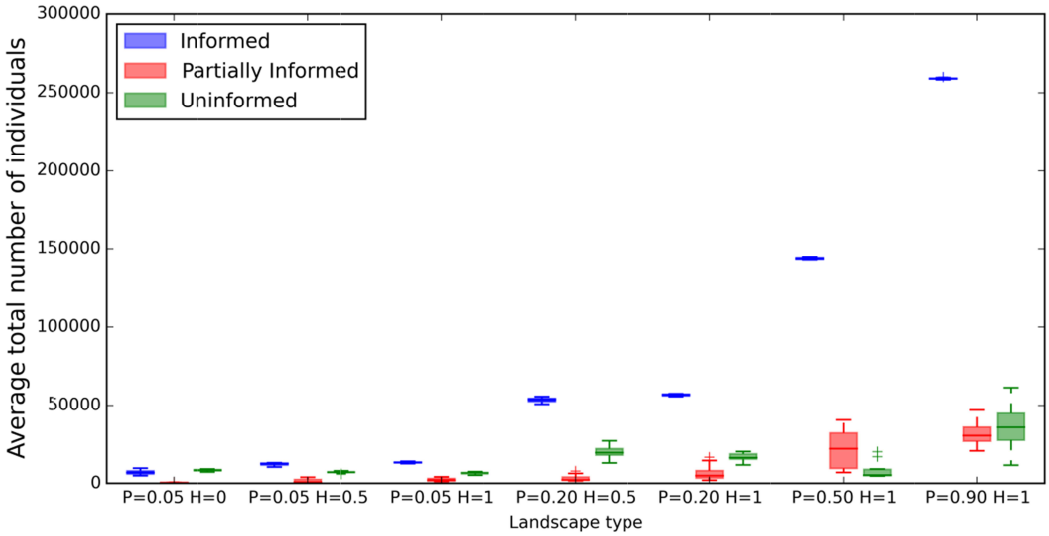

Figure S5.1: The effect of habitat fragmentation and destruction on the total number of individuals of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* level of autocorrelation).

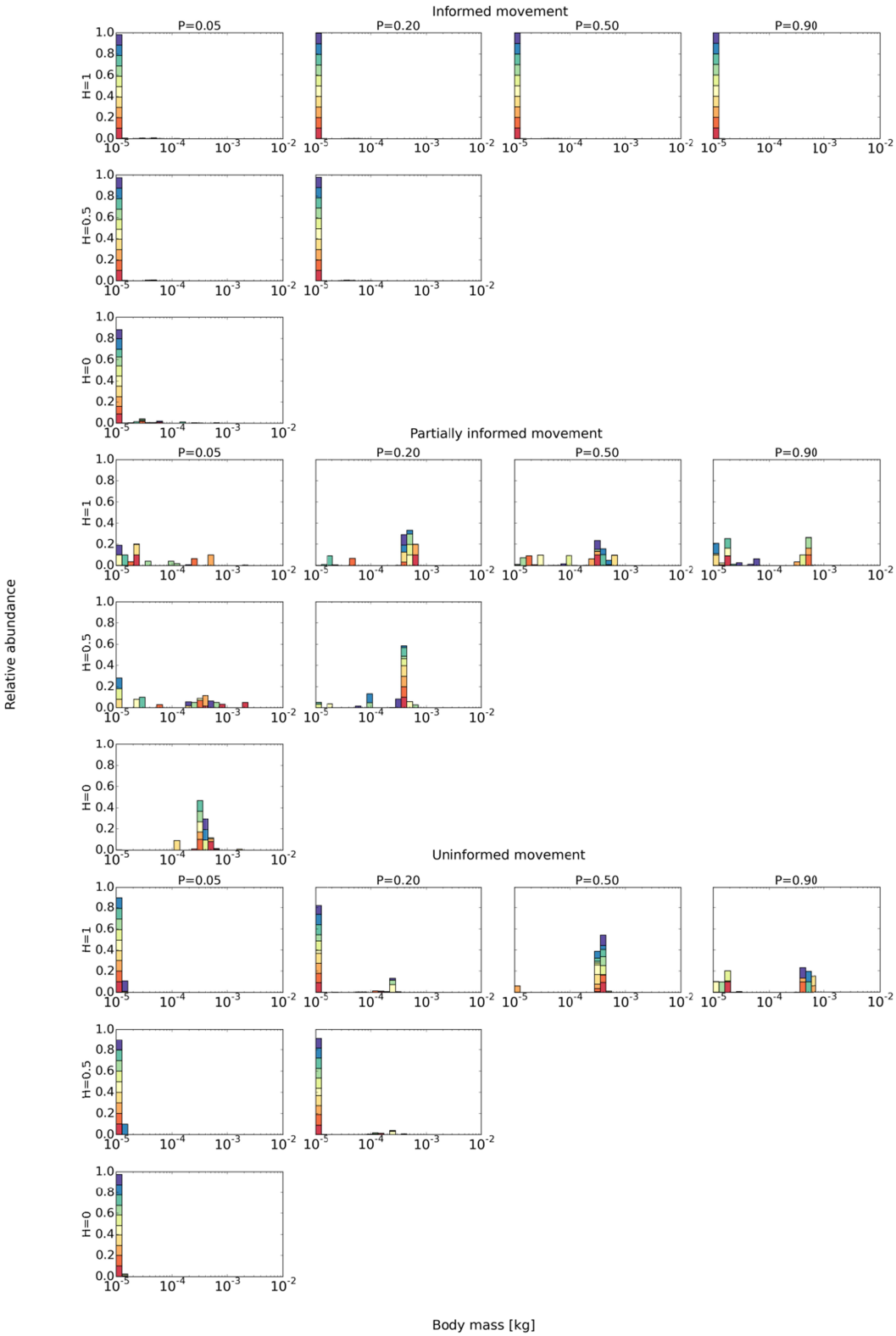

Figure S5.2: The effect of habitat fragmentation and destruction on the adult body size distribution of a consumer population or community, with movement of the consumer informed, partially informed or uninformed. The configuration of suitable habitat within a landscape is described by P (percentage of suitable habitat) and H (level of autocorrelation). Each color represents the outcome of a single simulation. In total, ten simulations were run per scenario. In this figure, total abundance is scaled to the sum of all ten simulations. Values of fixed parameters are given in table S1.1. Boundaries of the applied mass classes are available in table S5.1.

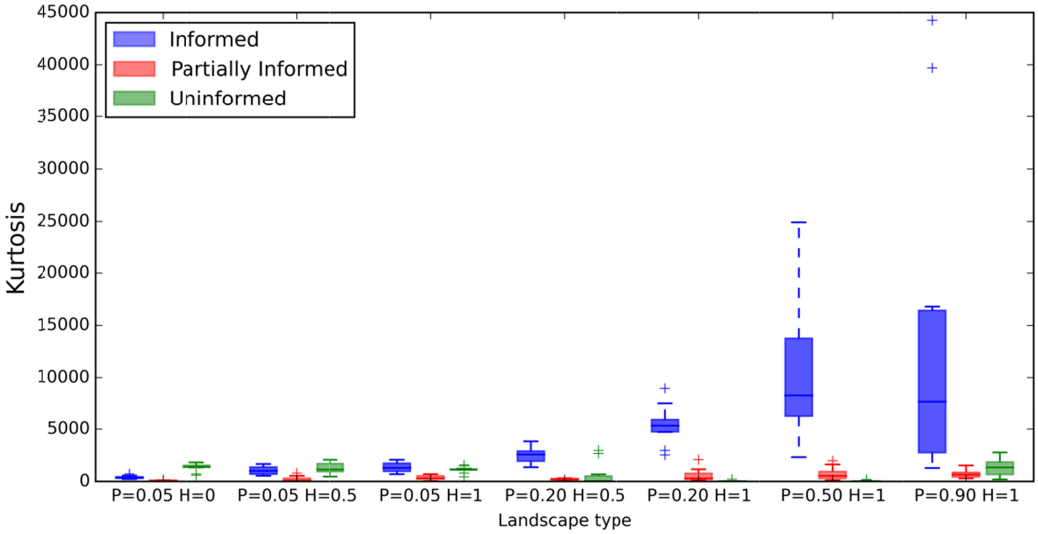

Figure S5.3: The effect of habitat fragmentation and destruction on kurtosis of adult body mass distributions of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

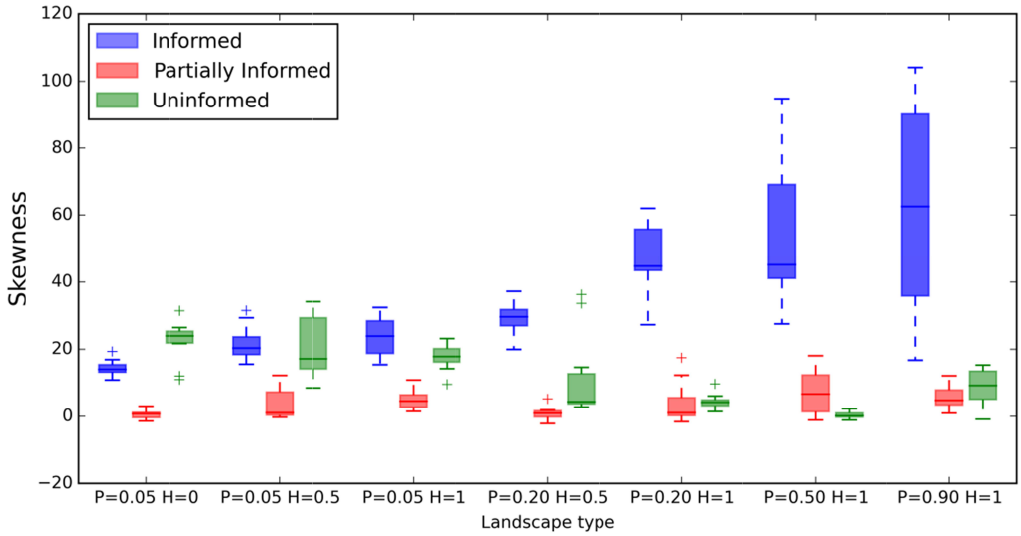

Figure S5.4: The effect of habitat fragmentation and destruction on the skewness of adult body size distributions of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

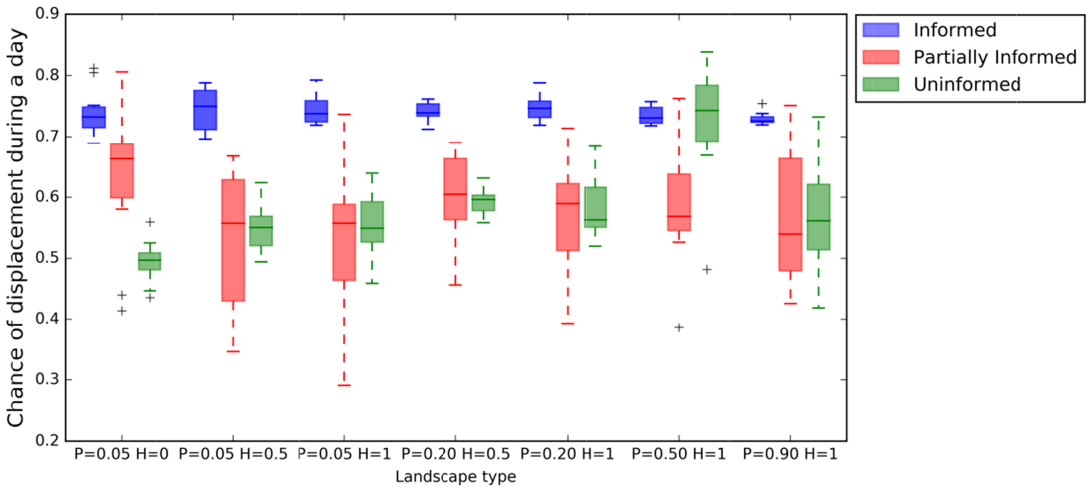

Figure S5.5: The effect of habitat fragmentation and destruction on the chance of displacement during a day of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

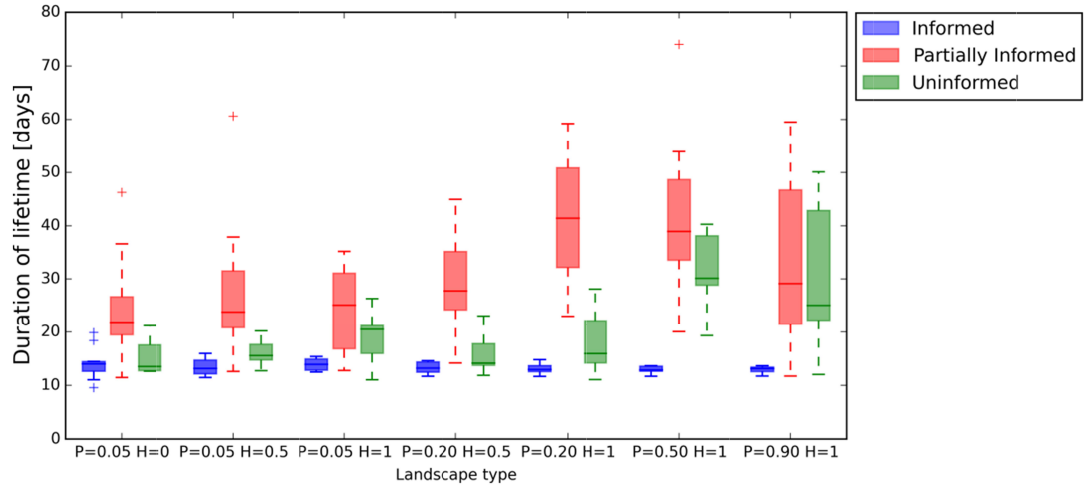

Figure S5.6: The effect of habitat fragmentation and destruction on total lifetime of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

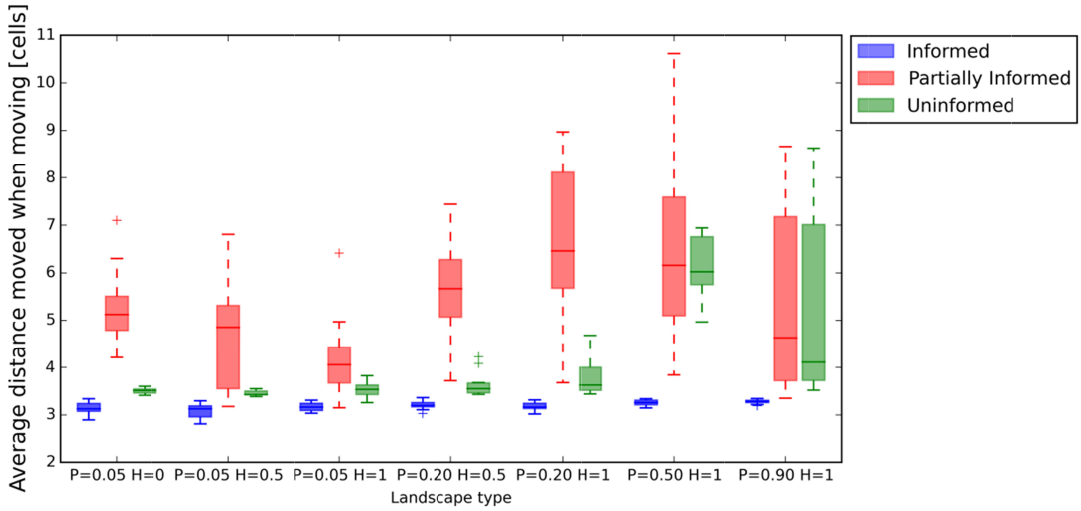

Figure S5.7: The effect of habitat fragmentation and destruction on the average distance moved when moving by the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

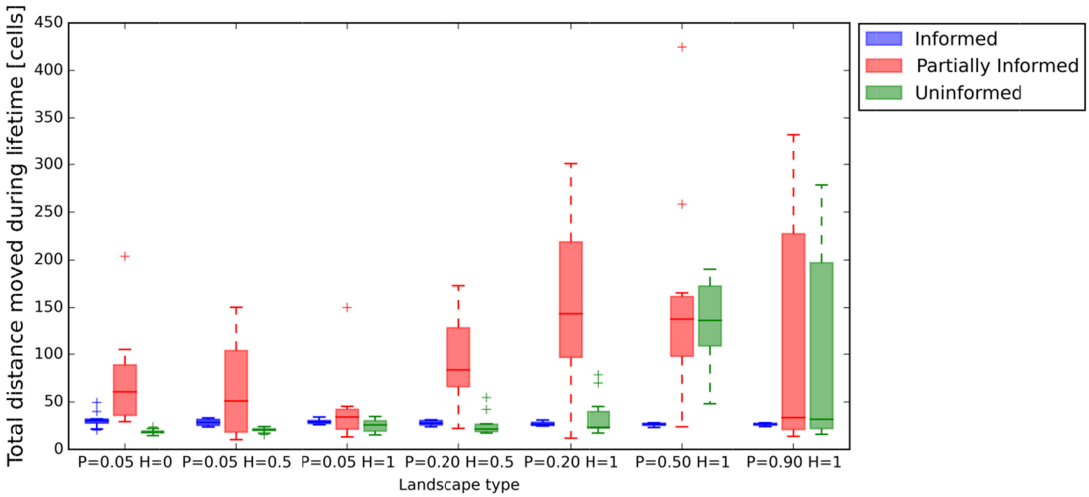

Figure S5.8: The effect of habitat fragmentation and destruction on the total distance moved during lifetime of the consumer(s) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

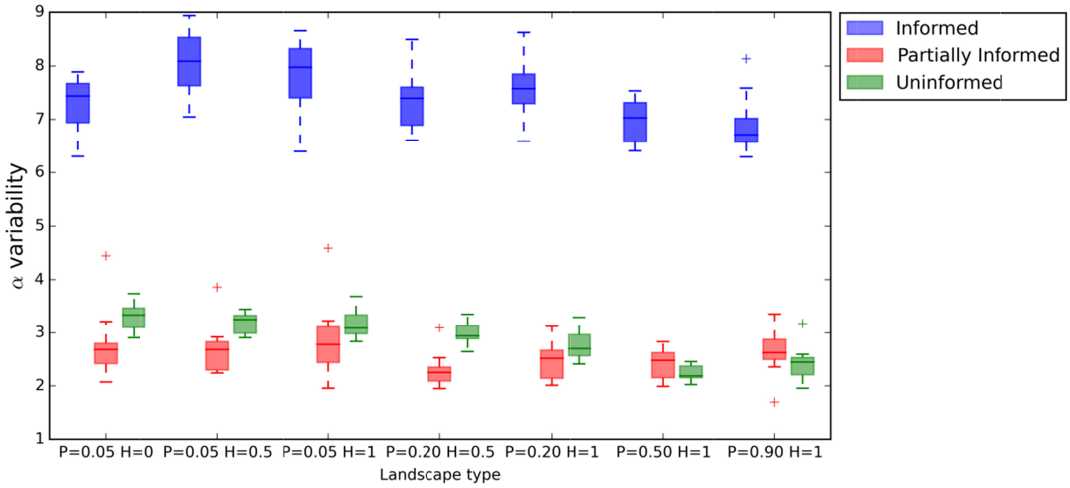

Figure S5.9: The effect of habitat fragmentation and destruction on *α* variability (variability at the local scale) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

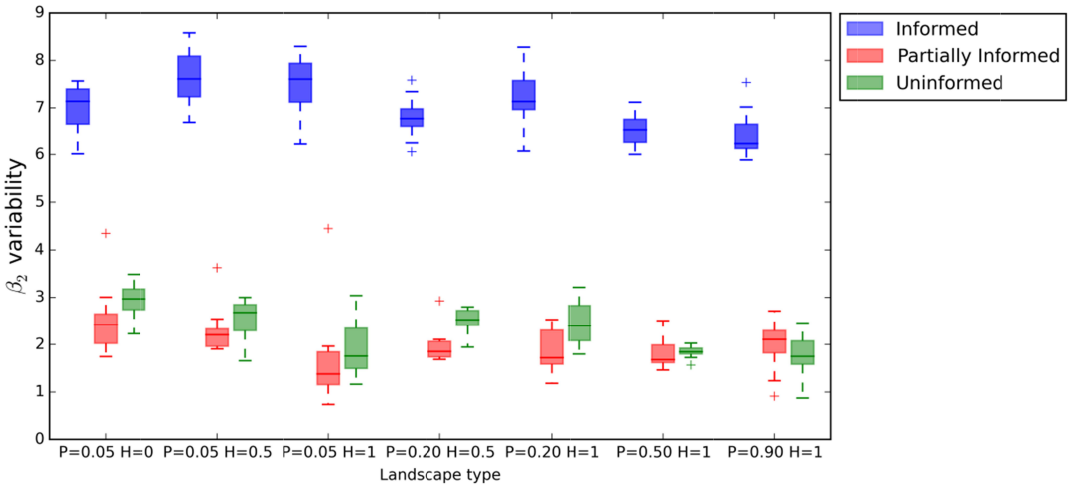

Figure S5.10: The effect of habitat fragmentation and destruction on β_2 variability (variability at the inter patch scale) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

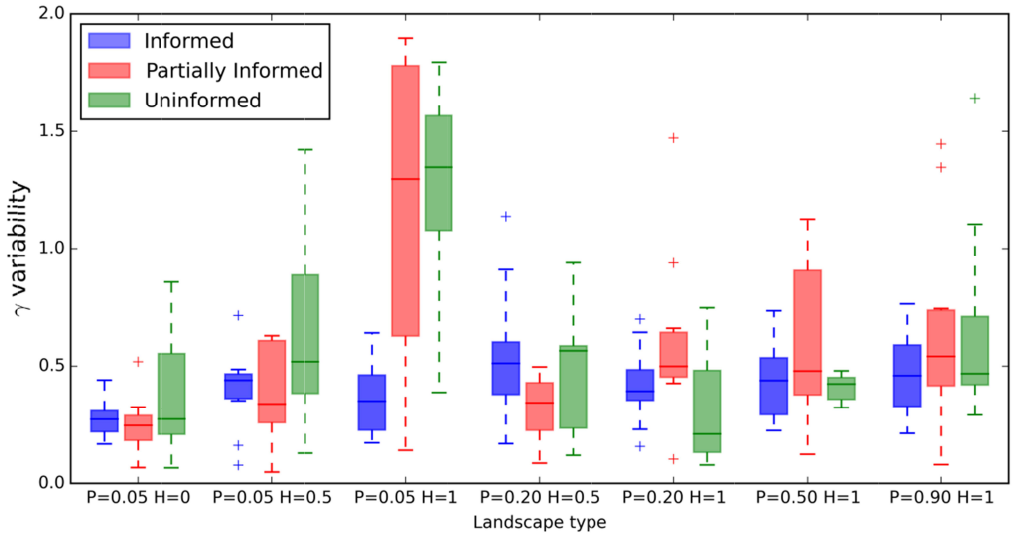

Figure S5.11: The effect of habitat fragmentation and destruction on *γ* variability (variability at the landscape scale) for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

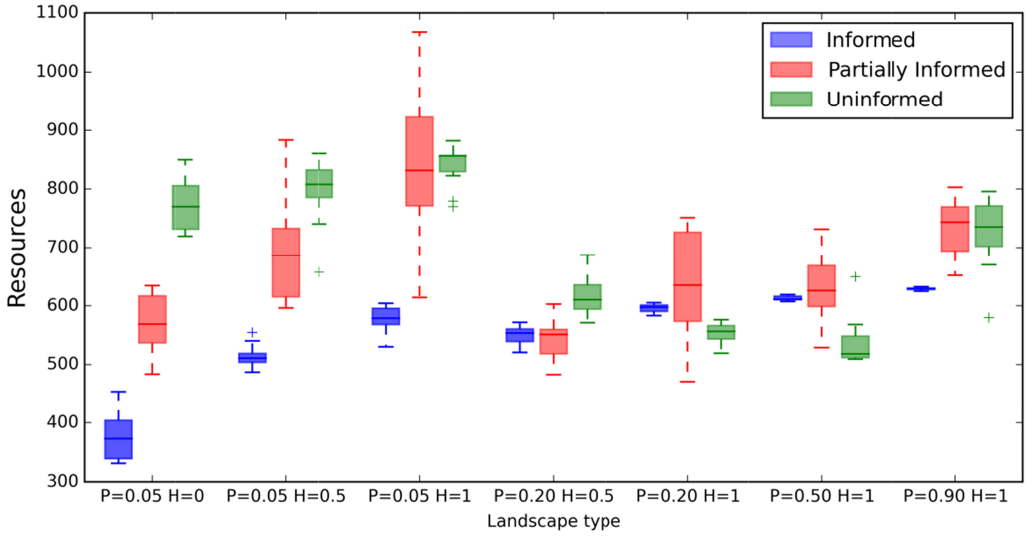

Figure S5.12: The effect of habitat fragmentation and destruction on the amount of resources available within the landscape for each of the three types of information use during movement (informed, partially informed or uninformed). The configuration of suitable habitat within a landscape is described by means of *P* (percentage of suitable habitat) and *H* (level of autocorrelation).

Table S5.1: The boundaries of the mass classes applied in figure S5.2.

Mass class	Lower boundary (in kg)	Upper boundary (in kg)
1	1.00000000e-05	1.26827487e-05
2	1.26827487e-05	1.60852113e-05
3	1.60852113e-05	2.04004692e-05
4	2.04004692e-05	2.58734024e-05
5	2.58734024e-05	3.28145859e-05
6	3.28145859e-05	4.16179145e-05
7	4.16179145e-05	5.27829549e-05
8	5.27829549e-05	6.69432950e-05
9	6.69432950e-05	8.49024984e-05
10	8.49024984e-05	1.07679705e-04
11	1.07679705e-04	1.36567463e-04
12	1.36567463e-04	1.73205081e-04
13	1.73205081e-04	2.19671650e-04
14	2.19671650e-04	2.78604033e-04
15	2.78604033e-04	3.53346492e-04
16	3.53346492e-04	4.48140475e-04
17	4.48140475e-04	5.68365300e-04
18	5.68365300e-04	7.20843424e-04
19	7.20843424e-04	9.14227597e-04
20	9.14227597e-04	1.15949188e-03
21	1.15949188e-03	1.47055441e-03
22	1.47055441e-03	1.86506720e-03
23	1.86506720e-03	2.36541785e-03
24	2.36541785e-03	3.00000000e-03