**Supplementary Table S1** Data matrix for *Rhabdomys pumilio* with corresponding presence/absence of each flea species among host populations.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Flea species** | **GP** | **GS** | **VR** | **HT** | **AB** | **MP** | **CS** | **BR** |
| *Chiastopsylla rossi* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Listropsylla agrippinae* | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| *Dinopsyllus abaris* | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| *Xenopsylla eridos* | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| *Chiastopsylla qaudrisetis* | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Chiastopsylla carus* | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| *Chiastopsylla capensis* | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| *Chiastopsylla mulleri simplex* | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Chiastopsylla pitchfordii* | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| *Hysophthalmus temporis* | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| *Dinopsyllus tenax* | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |

**Supplementary Table S2** Data matrix for *Rhabdomys intermedius* with corresponding presence/absence of each flea species among host populations.

|  |  |  |  |
| --- | --- | --- | --- |
| **Flea species** | **BW** | **LF** | **SL** |
| *Chiastopsylla rossi* | 1 | 1 | 1 |
| *Listropsylla agrippinae* | 1 | 1 | 1 |
| *Xenopsylla eridos* | 1 | 0 | 0 |
| *Chiastopsylla mulleri simplex* | 0 | 1 | 0 |
| *Chiastopsylla coraxis* | 1 | 0 | 1 |

**Supplementary Table S3** Data matrix for *Rhabdomys dilectus* with corresponding presence/absence of each flea species among host populations.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Flea species** | **HB** | **MG** | **MS** | **IN** | **TC** |
| *Ctenophthalmus calceatus* | 1 | 1 | 1 | 1 | 1 |
| *Dinopsyllus ellobius* | 1 | 1 | 1 | 0 | 1 |
| *Chiastopsylla rossi* | 1 | 0 | 0 | 0 | 1 |
| *Listropsylla agrippinae* | 1 | 0 | 0 | 0 | 0 |
| *Xenopsylla cheopis* | 0 | 0 | 0 | 1 | 0 |
| *Listropsylla prominens* | 0 | 0 | 0 | 1 | 0 |
| *Ctenophthalmus natalensis* | 0 | 1 | 1 | 0 | 0 |