

Table S1. Number and sex of *Asterias amurensis* sampled for *Orchitophrya stellarum* from 18 sites in the Derwent estuary, Tasmania, Australia, between February 1996 and December 1997. The percentage of males (of total number of males and females) is listed (%).

| Site | Male (%Male) | Female | Undetermined | Hermaphrodite | Total |
|---------------------------|-----------------|------------|--------------|---------------|-------------|
| Battery Point | 3 (33) | 6 | 0 | 0 | 9 |
| Constitution Dock | 72 (45) | 89 | 103 | 0 | 264 |
| Derwent Sailing Squadron | 26 (54) | 22 | 0 | 0 | 48 |
| Droughty Point | 1 (50) | 1 | 2 | 0 | 4 |
| Kangaroo Bay/ Bellerive | | | | | |
| Yacht Club | 14 (42) | 19 | 26 | 0 | 59 |
| Macquarie Wharf | 3 (50) | 3 | 9 | 0 | 15 |
| Nutgrove Beach/ Prossers | 23 (37) | 39 | 1 | 0 | 63 |
| Opossum Bay | 23 (64) | 13 | 5 | 0 | 41 |
| (Former) Pasminco wharf, | | | | | |
| Luton | 142 (48) | 152 | 168 | 6 | 468 |
| Pipe Clay Lagoon | 3 (38) | 5 | 21 | 0 | 29 |
| Princes wharf/ Block One/ | | | | | |
| CSIRO | 26 (38) | 42 | 9 | 0 | 77 |
| Ralphs Bay | 83 (39) | 132 | 133 | 0 | 348 |
| Rowing Club | 10 (67) | 5 | 3 | 0 | 18 |
| Royal Yacht Club Tasmania | 34 (45) | 42 | 37 | 0 | 113 |
| Selfs Point Wharf | 48 (49) | 50 | 0 | 2 | 100 |
| Taroona | 13 (57) | 10 | 0 | 0 | 23 |
| Tranmere Bay | 0 (0) | 4 | 10 | 0 | 14 |
| Wrest Point Hotel Casino | 17 (49) | 18 | 0 | 0 | 35 |
| Total | 541 (45) | 652 | 527 | 8 | 1728 |

Table S2. Seastar species examined for *O. stellarum* partitioned by Site (Table 1) and Date of collection (month/year), infection status (Infected/Total; Prevalence) for Male, Female and Undetermined sex, percent seastars that were male (% Male), number of hermaphrodites, and total number of seastars. Not all female *A. rubens* from Europe were examined for infection; the number of females not examined is listed in square brackets.

| Species | Site | Date | Inf/Tot Male (%Prev) | % Male | Inf/Tot Fem (%Prev) | Inf/Tot Undet (%Prev) | Herm | Tot |
|--------------------------------|------|----------------|----------------------------|------------|---------------------------|-----------------------------|------|-------------|
| Pacific Ocean | | | | | | | | |
| <i>Pisaster ochraceus</i> | | | | | | | | |
| BC, Canada | 15 | 5/97 | 11/16 (69) | 47 | 0/18 | 0/0 | 0 | 34 |
| <i>Asterias amurensis</i> | | | | | | | | |
| Australia | 16 | 2/96- 12/97 | 0/541 | 45 | 0/652 | 0/527 | 8 | 1728 |
| Japan | 1 | 2/97 | 8/21 (38) | 45 | 0/25 | 0/10 | 1 | 57 |
| | 1 | 3/97 | 12/27 (44) | 39 | 0/42 | 0/5 | 1 | 75 |
| | 2 | 2-3/97 | 7/10 (70) | 35 | 0/17 | 0/9 | 0 | 36 |
| | 3 | 2/97 | 2/7 (29) | 38 | 0/13 | 0/4 | 0 | 24 |
| | 1 | 5/97 | 4/23 (17) | 40 | 1/35 (3) | 0/16 | 0 | 74 |
| | 4 | 6/97 | 0/0 | 0 | 0/1 | 0/1 | 0 | 2 |
| | 6 | 6/97 | 8/29 (28) | 39 | 1/46 (2) | 0/24 | 0 | 99 |
| | 1 | 11/97 | 10/11 (91) | 31 | 7/32 (28) | 10/28 (56) | 0 | 71 |
| | 7 | 11/97 | 1/2 (50) | 8 | 0/23 | 1/26 (4) | 0 | 51 |
| | | Tot | 52/130 (40) | 36 | 9/234 (4) | 11/123 (9) | 2 | 489 |
| Korea | 17 | 3/99 | 0/30 | 77 | 0/9 | 0/1 | 0 | 40 |
| | 20 | 3/99 | 7/18 (39) | 58 | 0/13 | 0/1 | 0 | 32 |
| | 18 | 3/99 | 4/8 (50) | 24 | 0/26 | 0/1 | 0 | 35 |
| | 19 | 3/99 | 4/17 (24) | 39 | 0/27 | 0/0 | 0 | 44 |
| | | | Tot | 15/73 (21) | 49 | 0/75 | 0/3 | 0 |
| <i>A. amurensis versicolor</i> | | | | | | | | |
| Japan | 10 | 11/97 | 0/14 | 44 | 0/18 | 0/1 | 0 | 33 |
| | 8 | 11/97 | 0/8 | 57 | 0/6 | 0/0 | 0 | 14 |
| | 9 | 11/97 | 0/34 | 60 | 0/23 | 0/0 | 0 | 57 |
| | | | Tot | 0/56 | 54 | 0/47 | 0/1 | 0 |
| Atlantic Ocean | | | | | | | | |
| <i>Asterias rubens</i> | | | | | | | | |
| Netherlands | 12 | 4/97 | 26/49 (53) | 54 | 0/16 (0) [27] | 0/0 | 0 | 92 |
| Netherlands | 13 | 4/97 | 16/25 (64) | 37 | 1/5 (20) [22] | 0/2 | 0 | 70 |
| France | 11 | 4/97 | 22/43 (51) | 46 | 0/25 (0) [25] | 0/1 | 0 | 94 |
| PEI, Canada | 14 | 4/97 | 4/84 (5) | 44 | 1/110 | 0/6 | 0 | 200 |
| | | Tot | 68/201 (34) | 44 | 2/246 | 0/9 | 0 | 456 |