

Table 1. Location and sampling date of seven survey sites where adults of *Ischnura asiatica* were collected in mainland Japan.

Site	Water area [m ²]	Latitude	Longitude	Sampling date
A	225	34°35'39"N	133°55'33"E	22, 23, 25-v-2010
B	71,000	36°02'33"N	140°08'50"E	15-vi-2010
C	1,900	36°04'53"N	140°04'51"E	20, 21, 25, 28, 29-v-2012
D	3,300	36°06'17"N	140°00'32"E	19-vi-2010
E	22,500	36°09'28"N	140°03'50"E	16-vi-2010
F	245,000	38°36'42"N	141°14'14"E	02-viii-2010
G	150	40°48'46"N	140°41'34"E	06-vii-2010

worn wing condition. Several old individuals, judged by their dark body and some broken wings, were captured at site F.

The mean hindwing length of males was significantly different across populations, ranging from 13.1 to 15.6 mm (Kruskal-Wallis test, $\chi^2 = 44.4$, $P < 0.01$). The largest males were found at sites C and D, while the smallest males were mainly at sites E, F, and G. The width of the penis head was also significantly different across the local populations (Kruskal-Wallis test, $\chi^2 = 26.1$, $P < 0.01$), ranging from 275.7 to 304.2 μm . The males with wider penis heads were found in the local populations at sites A and D, while the males with narrower penis heads were found in the local populations at sites B, E, F, and G. As shown in Figure 3, the width of the penis head was positively correlated with male hindwing length.

The mean hindwing length of females was also significantly different across the populations, ranging from 15.3 to 17.4 mm (Kruskal-Wallis test, $\chi^2 = 23.8$, $P < 0.01$). The larger females were found in the local populations at sites C and D, while the smaller females were found in the local populations at sites E, F, and G, the same pattern of variation found in males. There were significant differences in sensillum number across populations (Kruskal-Wallis test, $\chi^2 = 19.3$, $P < 0.01$). There seemed to be a negative relationship between body size and the number of vaginal plates, though the trend was not significant at the 0.05 level (Fig. 4).

As shown in Figure 5, there was a negative relationship between the penis head width and the number of vaginal sensilla. For example, at site A,

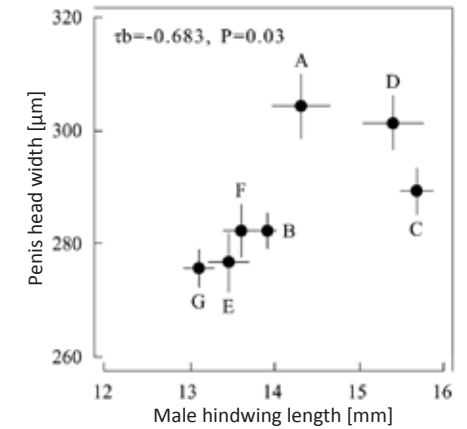


Figure 3. Relationship between the mean male hindwing length and the mean width of the penis head for each studied population of *Ischnura asiatica* in Japan (\pm SE) as tested by using the Kendall rank correlation test. Letters indicate each population (see Fig. 2).

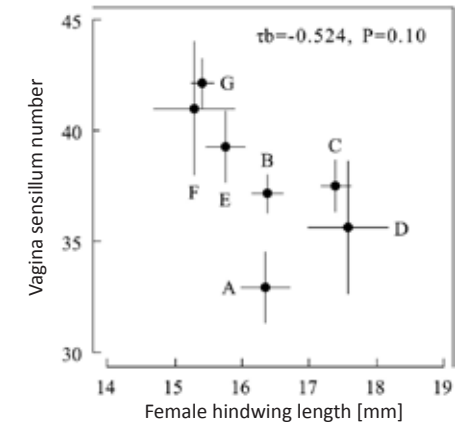


Figure 4. Relationship between the mean female hindwing length and the mean number of vaginal sensilla for each studied population of *Ischnura asiatica* in Japan (\pm SE) as tested by using the Kendall rank correlation test. Letters indicate each population (see Fig. 2).

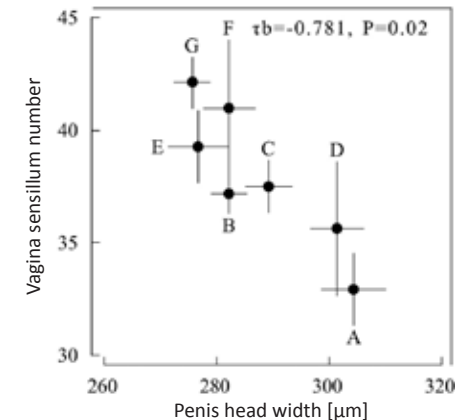


Figure 5. Relationship between the mean width of the penis head and the number of vaginal sensilla for each studied population of *Ischnura asiatica* in Japan (\pm SE) as tested by using the Kendall rank correlation test. Letters indicate each population (see Fig. 2).