## Table 1

| Family         | Genus    | Species              |
|----------------|----------|----------------------|
| Brassicaceae   | Brassica | Brassica rapa        |
| Brassicaceae   | Brassica | Brassica oleracea    |
| Brassicaceae   | Eruca    | Eruca versicaria     |
| Brassicaceae   | Sinapis  | Sinapis alba         |
| Convolvulaceae | Ipomoea  | Ipomoea aquatica     |
| Convolvulaceae | Ipomoea  | Ipomoea purpurea     |
| Solanaceae     | Capsicum | Capsicum annuum      |
| Solanaceae     | Petunia  | Petunia integrifolia |
| Solanaceae     | Solanum  | Solanum lycopersicum |
| Solanaceae     | Solanum  | Solanum melongena    |

Table 2

| Species              | Cross     | Self       | Natural_selfing | Apomixis |
|----------------------|-----------|------------|-----------------|----------|
| Brassica oleracea    | 32.06897  | 0.0000000  | 0.00000         | 0        |
| Brassica rapa        | 44.97041  | 0.0000000  | 0.00000         | 0        |
| Eruca versicaria     | 23.75000  | 0.4166667  | 0.00000         | 0        |
| Sinapis alba         | 43.33333  | 48.3333333 | 5.00000         | 15       |
| Ipomoea aquatica     | 40.00000  | 30.0000000 | 20.00000        | 0        |
| Ipomoea purpurea     | 31.66667  | 86.6666667 | 31.66667        | 0        |
| Capsicum annuum      | 100.00000 | 66.2240664 | 23.48548        | 0        |
| Petunia integrifolia | 100.00000 | 24.7727273 | 0.00000         | 0        |
| Solanum lycopersicum | 90.38043  | 43.4782609 | 70.00000        | 0        |
| Solanum melongena    | 60.47525  | 87.9702970 | 21.56436        | 0        |

Table 3

| Family       | Species         | Donor           | Seeds |
|--------------|-----------------|-----------------|-------|
| Brassicaceae | B. oleracea     | C. annuum       | 5     |
| Brassicaceae | B. rapa         | B. oleracea     | 2     |
| Brassicaceae | B. rapa         | B. oleracea     | 13    |
| Brassicaceae | B. rapa         | S. lycopersicum | 1     |
| Brassicaceae | B. rapa         | B. oleracea     | 7     |
| Brassicaceae | B. rapa         | B. oleracea     | 5     |
| Brassicaceae | S. alba         | B. oleracea     | 7     |
| Brassicaceae | E. sativa       | C. annuum       | 6     |
| Brassicaceae | E. sativa       | C. annuum       | 1     |
| Solanaceae   | S. lycopersicum | S. alba         | 3     |
| Solanaceae   | S. melongena    | P. integrifolia | 36    |
| Solanaceae   | C. annuum       | S. alba         | 127   |
| Solanaceae   | C. annuum       | E. sativa       | 3     |
|              |                 |                 |       |

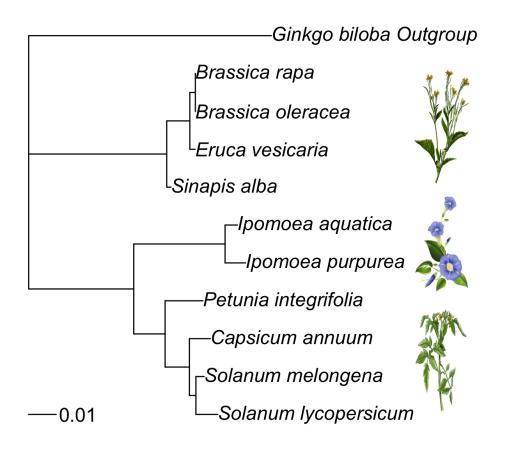


Figure 1

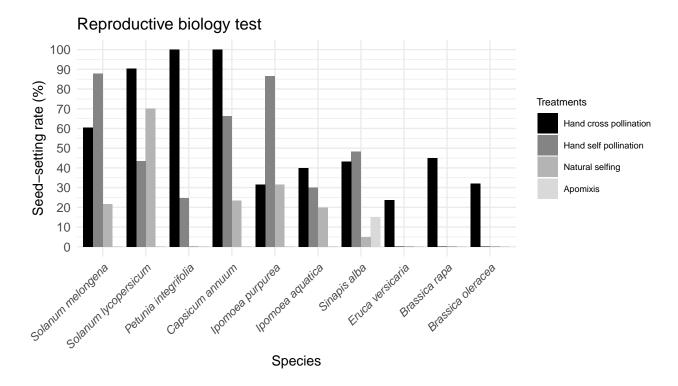


Figure 2

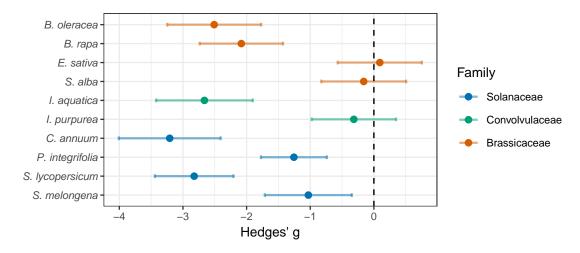


Figure 3

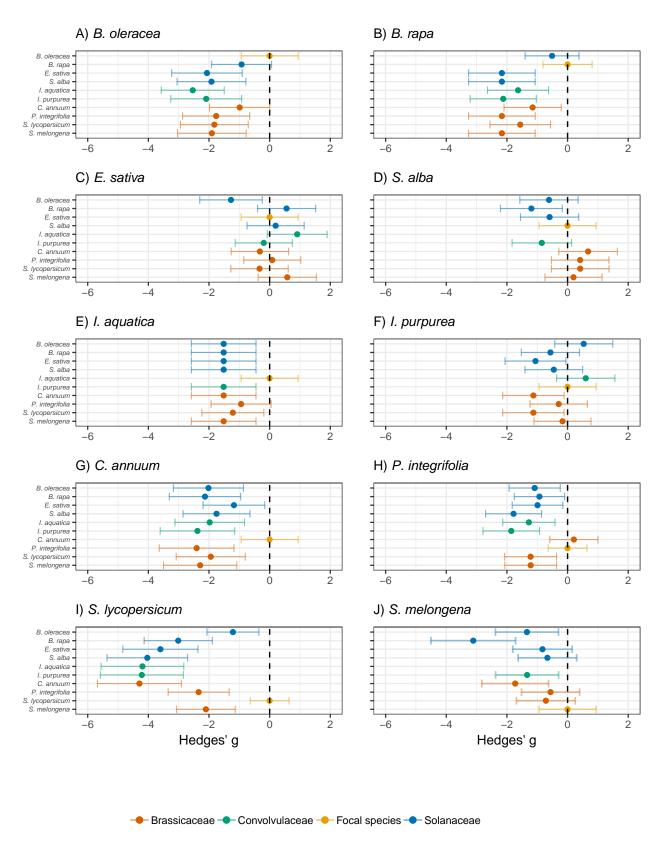


Figure 4

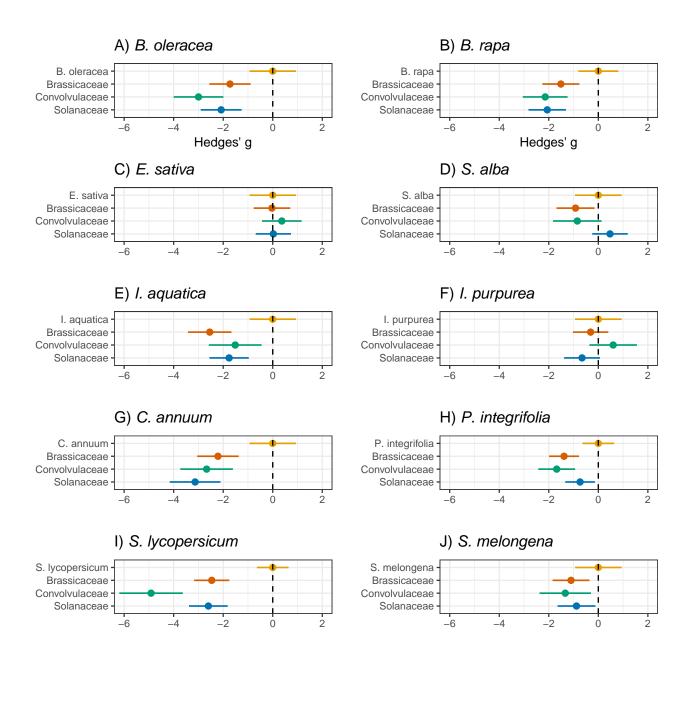


Figure 5

--- Brassicaceae --- Convolvulaceae --- Focal species --- Solanaceae

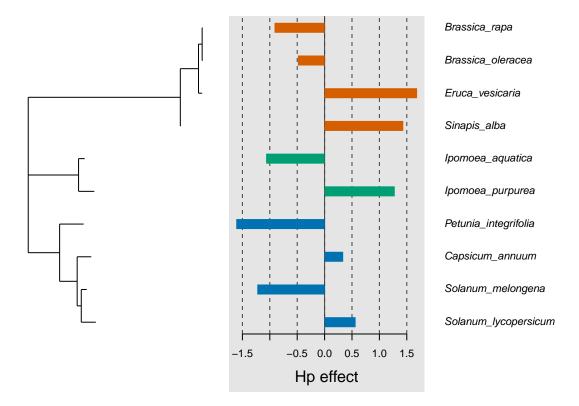


Figure 6

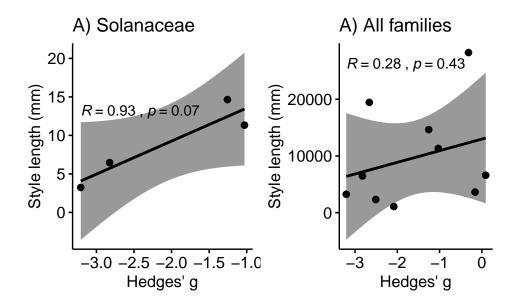
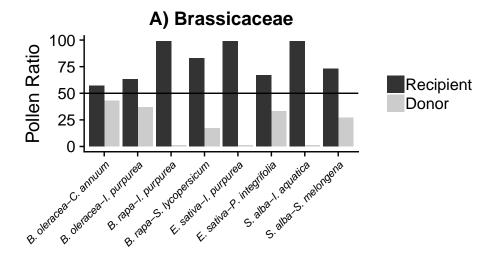
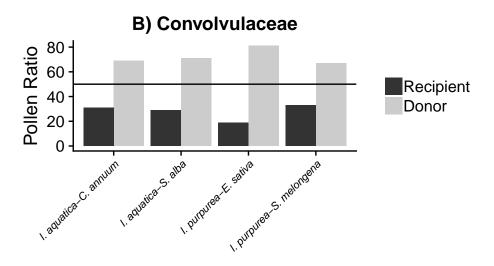


Figure 7





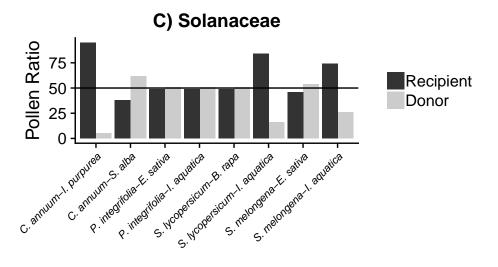
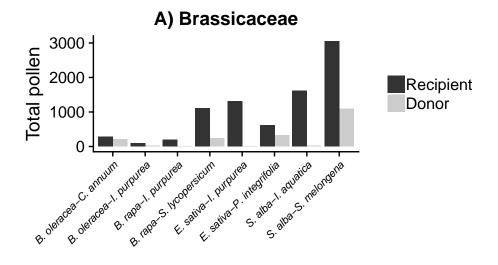
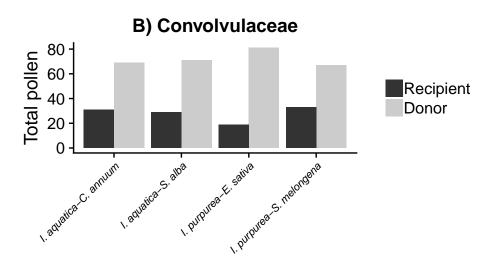


Figure 8





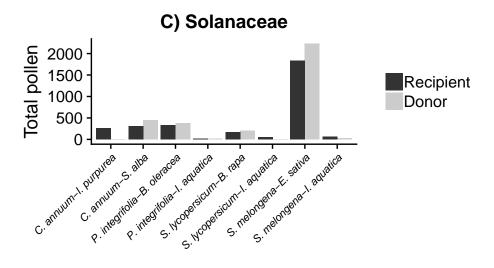


Figure 9

## List of tables

**Table 1** Species list with family and genus.

Table 2 Results of hand corss-pollination, hand self-pollination, natural selfing (unpollinated bagged flowers) and apomixis. The values are the average seed production per treatment (N=10) divided by the average number of ovules per species.

Table 3 Seed production for the treatments that produced seeds with 100% foreign pollen.

## List of figures

**Figure 1** Phylogenetic tree of the species used in the experiment from three different families from top to bottom: Brassicaceae, Convolvulaceae and Solanaceae.

Figure 2 Barplot of the different tests of the reproductive biology of the species. The y axis is the percentage of ovules converted to seed. The different treatments are, hand cross-pollination, hand self-pollination, natural selfing and apomixis (N=10 for all of them).

**Figure 3** The impact of foreign pollen on recipient plant species. Effect sizes (with 95% confidence intervals) of 9 different donor species of heterospecific pollen upon all recipients.

**Figure 4** The response of heterospecific pollen upon 10 recipient plant species. Each panel represents one recipient plant species crossed with 50% mixes of the other 9 species.

## Figure 5

Figure 6 Phylogenetic signal of hterospecific pollen effect (hedges' g)

Figure 7 (comment) Simple Pearson correlation in order to show a possible path to follow in the article showing that style length and stigma size could explain the effect in Solanaceae species.

**Figure 8** Pollen ratio counts on stigma after hand pollination with 50-50% mix. The panel is divided by family: A) Brassicaceae, B) Convolvulaceae and C) Solanaceae. The pollen recipient species is coloured in black and the donor species in grey.

**Figure 9** Total pollen counts on stigma after hand pollination with 50-50% mix. The panel is divided by family: A) Brassicaceae, B) Convolvulaceae and C) Solanaceae. The pollen recipient species is coloured in black and the donor species in grey.