

1 Rhododendrons are shrubby plants that are widely distributed throughout the northern hemisphere.

The flowering periods and habitats of two species of rhododendron, found on Yakushima Island in Japan, are shown in the table below.

Species	Flowering period	Main flowering period	Habitat
<i>Rhododendron eriocarpum</i>	April to July	May	Rocky areas in lowland regions
<i>Rhododendron indicum</i>	May to July	June	High mountainous regions

Where these populations overlap, hybrid plants are found that have arisen as a result of cross-fertilisation between these two species. These hybrid plants are capable of flowering and producing viable seeds.

(a) Suggest why some scientists might prefer to classify *Rhododendron eriocarpum* and *Rhododendron indicum* as varieties within the same species rather than as two separate species.

(3)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(b) (i) Explain what is meant by the term **genetic diversity** in a species.

(2)

.....

.....

.....

.....

