

- 8 The photograph below shows Ethiopian wolves (*Canis simensis*). They live on isolated mountains at altitudes above 3000 metres. They are one of 19 endemic animal species living in the mountains of Ethiopia.



Magnification  $\times 0.01$

- (a) Explain what is meant by the term **endemic species**.

(1)

- (b) There are estimated to be only 500 Ethiopian wolves left in the wild, living in six separate populations. There are high levels of genetic diversity between these six populations.

The separate populations are geographically isolated. This prevents interbreeding between populations.

Suggest how this may affect the genetic diversity of each individual population.

(2)



(c) Ethiopian wolves are endangered in the wild.

Some scientists have suggested that moving male wolves from one population to another may help the species survive.

Suggest how this strategy of transferring individuals from one population to another could help the species survive.

(2)

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- (3)

(4)

**TOTAL FOR PAPER = 80 MARKS**

