Since the Hawaiian Islands have never been connected to other land masses, the great variety of plants in Hawaii must be a result of the long-distance dispersal of seeds, a process that requires both a method of transport and an equivalence between the ecology of the source area and that of the recipient area.

There is some dispute about the method of transport involved. Some biologists argue that ocean and air currents are responsible for the transport of plant seeds to Hawaii. Yet the results of flotation experiments and the low temperatures of air currents cast doubt on these hypotheses. More probable is bird transport, either externally, by accidental attachment of the seeds to feathers, or internally, by the swallowing of fruit and subsequent excretion of the seeds. While it is likely that fewer varieties of plant seeds have reached Hawaii externally than internally, more varieties are known to be adapted to external than to internal transport.

1. The author of the passage is primarily concerned with
   (A) discussing different approaches biologists have taken to testing theories about the distribution of plants in Hawaii
   (B) discussing different theories about the transport of plant seeds to Hawaii
   (C) discussing the extent to which air currents are responsible for the dispersal of plant seeds to Hawaii
   (D) resolving a dispute about the adaptability of plant seeds to bird transport
   (E) resolving a dispute about the ability of birds to carry plant seeds long distances

2. The author mentions the results of flotation experiments on plant seeds (lines 10-12) most probably in order to
   (A) support the claim that the distribution of plants in Hawaii is the result of the long-distance dispersal of seeds
   (B) lend credibility to the thesis that air currents provide a method of transport for plant seeds to Hawaii
   (C) suggest that the long-distance dispersal of seeds is a process that requires long periods of time
   (D) challenge the claim that ocean currents are responsible for the transport of plant seeds to Hawaii
   (E) refute the claim that Hawaiian flora evolved independently from flora in other parts of the world

3. It can be inferred from information in the passage that the existence in alpine regions of Hawaii of a plant species that also grows in the southwestern United States would justify which of the following conclusions?
   (A) The ecology of the southwestern United States is similar in important respects to the ecology of alpine regions of Hawaii.
   (B) There are ocean currents that flow from the southwestern United States to Hawaii.
   (C) The plant species discovered in Hawaii must have traveled from the southwestern United States only very recently.
   (D) The plant species discovered in Hawaii reached there by attaching to the feathers of

birds migrating from the southwestern United States.

(E) The plant species discovered in Hawaii is especially well adapted to transport over long distances.

4. The passage supplies information for answering which of the following questions?

(A) Why does successful long-distance dispersal of plant seeds require an equivalence between the ecology of the source area and that of the recipient area?

(B) Why are more varieties of plant seeds adapted to external rather than to internal bird transport?

(C) What varieties of plant seeds are birds that fly long distances most likely to swallow?

(D) What is a reason for accepting the long-distance dispersal of plant seeds as an explanation for the origin of Hawaiian flora?

(E) What evidence do biologists cite to argue that ocean and air currents are responsible for the transport of plant seeds to Hawaii?