

1

Fig. 1.1 shows five mammals.

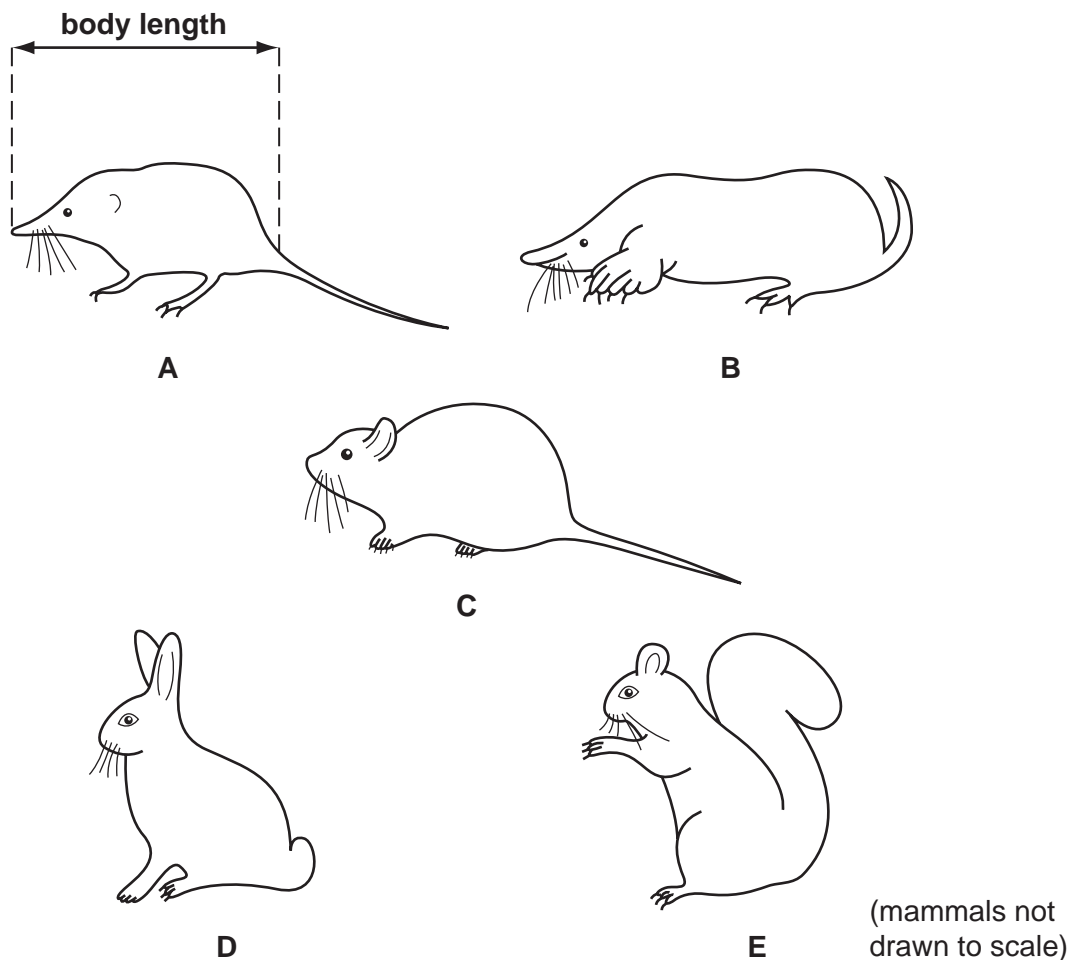


Fig. 1.1

(a) Use the key to identify each of these mammals. Write the letter for each mammal in Table 1.1.

- | | |
|---|--------------------------------|
| 1 tail more than half that of body length | go to 2 |
| tail less than half that of body length | go to 4 |
| 2 ears at top of head, with thick tail | <i>Sciurus caroliniensis</i> |
| ears at side of head, with thin tail | go to 3 |
| 3 nose pointed, nose length longer than its depth | <i>Sorex araneus</i> |
| nose blunt, nose length shorter than its depth | <i>Clethrionomys glareolus</i> |
| 4 front legs as wide or wider than long | <i>Talpa europaea</i> |
| front legs longer than wide | <i>Oryctolagus cuniculus</i> |

Table 1.1

name of mammal	letter
<i>Clethrionomys glareolus</i>
<i>Oryctolagus cuniculus</i>
<i>Sciurus caroliniensis</i>
<i>Sorex araneus</i>
<i>Talpa europaea</i>

[4]

(b) Fig. 1.2 shows a young deer feeding from its mother.

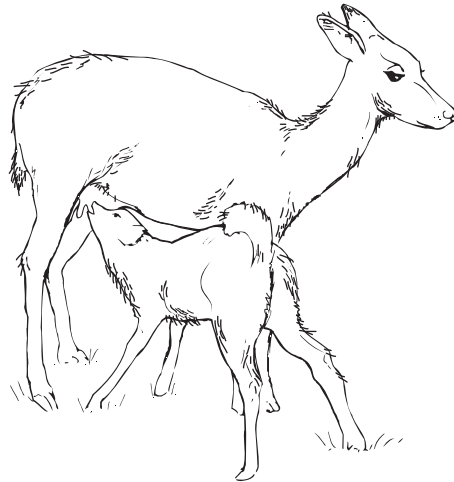


Fig. 1.2

State two features of the deer, visible in Fig. 1.2, that distinguish mammals from other vertebrates.

1

2 [2]

[Total: 6]

MARKING SCHEME:

(a) CHECK FIG. 1.1 FOR ANSWERS

- C (Clethrionomys glareolus) ;
- D (Oryctolagus cuniculus) ;
- E (Sciurus caroliniensis) ;
- A (Sorex araneus) ;
- B (Talpa europaea) ;

max. 4

Bracket the first two answers together for the first tick

- (b)** ref. to presence of fur / hair ;
ref. to mammary gland / breast / udders / nipples / breast feeding /
production of milk (to feed young) / suckling ;
ref. to external ears / presence of pinna ; **A** description

max. 2

total max. 6

Expert solutions:

(a) The features can be checked from the diagram and hence no explanation is needed

(b) Two features of deer that distinguish mammals from other vertebrates are:

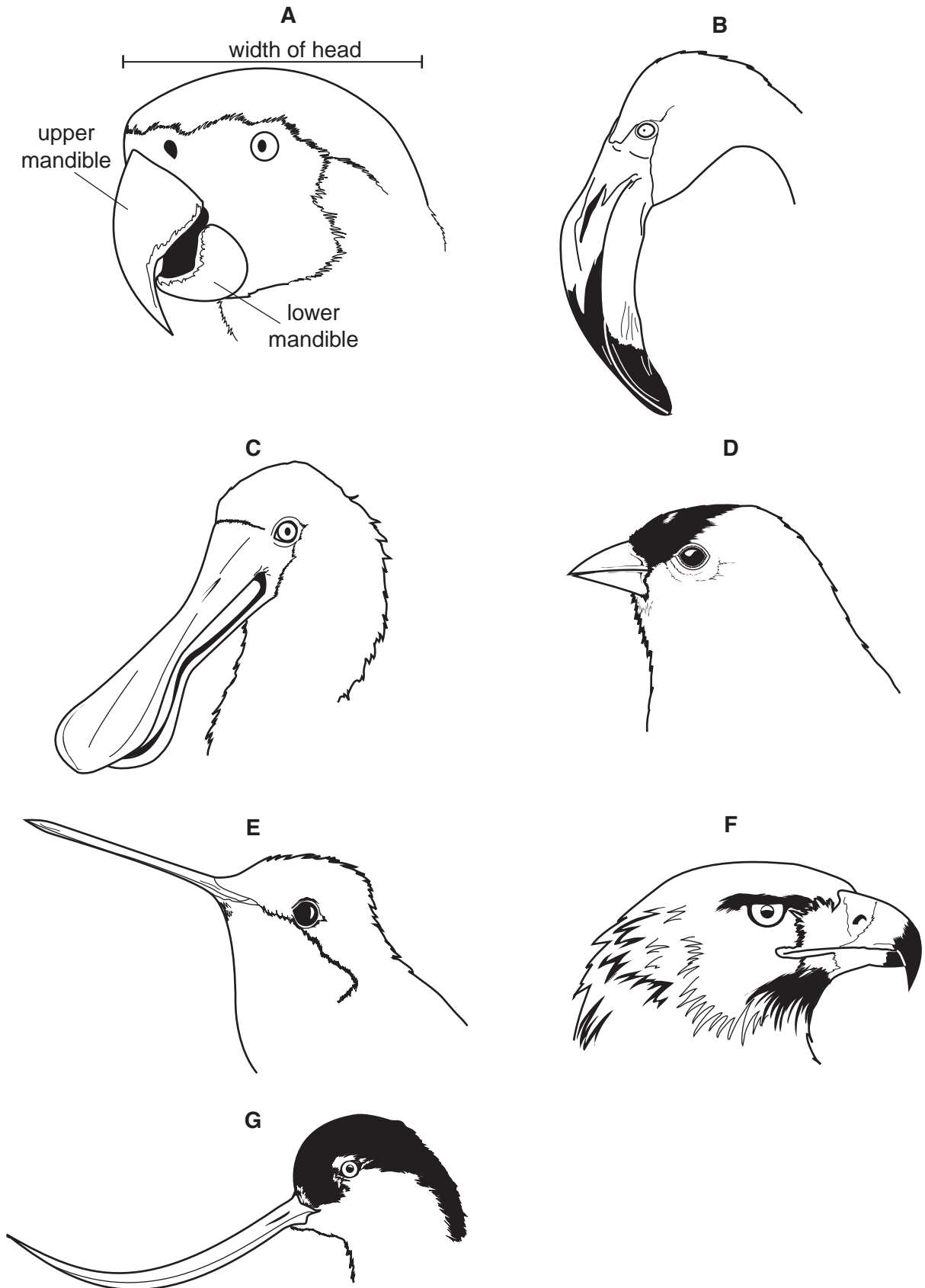
1. Presence of fur
2. Presence of mammary glands

For (b) The other acceptable answers are: production of milk[or] presence of external ears

2

Birds show variation in the sizes and shapes of their beaks. A beak is composed of an upper mandible and a lower mandible.

Fig. 1.2 shows the heads of seven different species of bird.



not drawn to scale

Fig. 1.2

Use the key to identify each species. Write the letter of each species (**A** to **G**) in the correct box beside the key. One has been done for you.

key

1	(a)	beak is shorter than the width of the head	go to 2	
	(b)	beak is longer than the width of the head	go to 4	
2	(a)	upper mandible is same length as the lower mandible	<i>Spinus tristis</i>	
	(b)	upper mandible is longer than the lower mandible	go to 3	
3	(a)	lower mandible is about half the length of the upper mandible	<i>Ara ararauna</i>	A
	(b)	lower mandible is more than half the length of the upper mandible	<i>Aquila chrysaetos</i>	
4	(a)	both mandibles widen at the end of the beak	<i>Platalea regia</i>	
	(b)	both mandibles are a similar width along their whole length	go to 5	
5	(a)	beak is straight	<i>Trochilus polytmus</i>	
	(b)	beak is curved	go to 6	
6	(a)	beak curves upwards	<i>Recurvirostra americana</i>	
	(b)	beak curves downwards	<i>Phoenicopterus minor</i>	

[3]

MARKSCHEME

go to 2	
go to 4	
<i>Spinus tristis</i>	D
go to 3	
<i>Ara ararauna</i>	A
<i>Aquila chrysaetos</i>	F
<i>Platalea regia</i>	C
go to 5	
<i>Trochilus polytmus</i>	E
go to 6	
<i>Recurvirostra americana</i>	G
<i>Phoenicopterus minor</i>	B

5 or 6 correct = 3
3 or 4 correct = 2
1 or 2 correct = 1

[3]

Expert solutions:

(a) The features can be checked from the diagram and hence no explanation is needed