

BIRDS

1

The Ruddy duck, *Oxyura jamaicensis*, is a native of America.

A flock of 20 birds was introduced into Britain from America before 1950.

The original flock settled quickly in their new habitat and started breeding. Numbers now exceed 6000.

The White-headed duck, *Oxyura leucocephala*, (a native of Spain) is a closely related species to the Ruddy duck.

Female White-headed ducks are more attracted to male Ruddy ducks than to males of their own species.

Cross-breeding between the two species produces a new variety of fertile duck.

The White-headed duck is now threatened with extinction.

Some conservationists are considering a plan to kill the British population of Ruddy ducks to prevent the White-headed duck becoming extinct.

Fig. 6.1 shows a male Ruddy duck.

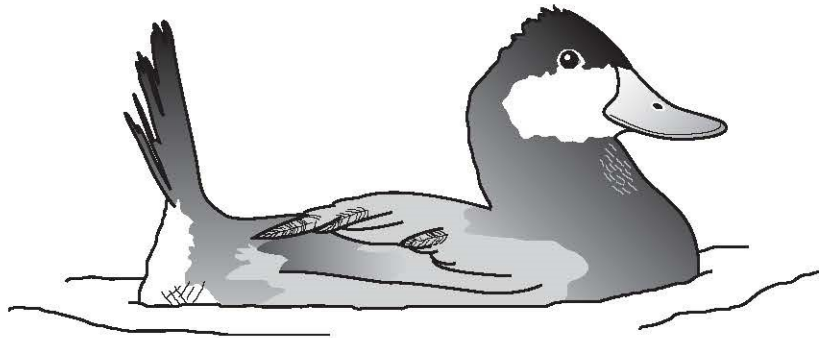


Fig. 6.1

- 5 (a) State two features, visible in Fig. 6.1, that distinguish birds, such as the Ruddy duck, from other vertebrate groups.

1

2 [2]

-----**Marking Scheme**-----

- (a) ref. to presence of feathers; (R) wings
ref. to presence of beak; (A) bill

[2]

Expert solution:

Features that distinguish birds from other vertebrate groups are presence of feathers and presence of beak

Note:If you write 'wings ' as a feature then it will be rejected. At the same time, if you write 'bill' as a feature, then it will be accepted[though it is recommended to write the ideal answers only, although certain words might be accepted]

2

Fig. 1.1 shows a common emerald dove, *Chalcophaps indica*.



Fig. 1.1

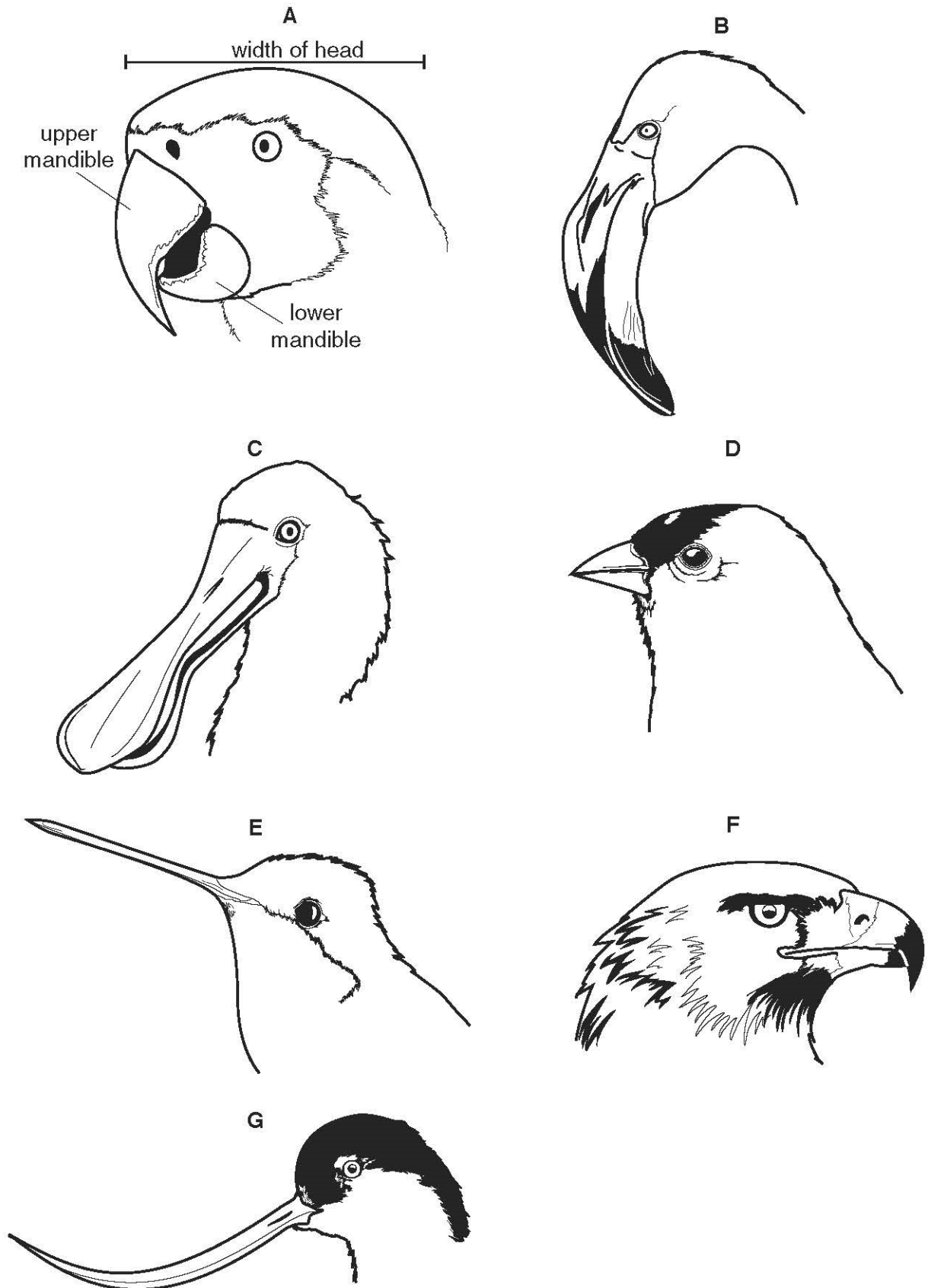
(a) Two distinguishing features of birds are beaks and wings.

State **one other** feature shown **only** by birds that is visible in Fig. 1.1.

.....[1]

- (b) 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]

-----Marking Scheme-----

(a)	feathers ;	max [1]																									
(b)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">go to 2</td><td style="width: 20%;"></td></tr> <tr><td>go to 4</td><td></td></tr> <tr><td><i>Spinus tristis</i></td><td>D</td></tr> <tr><td>go to 3</td><td></td></tr> <tr><td><i>Ara ararauna</i></td><td>A</td></tr> <tr><td><i>Aquila chrysaetos</i></td><td>F</td></tr> <tr><td><i>Platalea regia</i></td><td>C</td></tr> <tr><td>go to 5</td><td></td></tr> <tr><td><i>Trochilus polytmus</i></td><td>E</td></tr> <tr><td>go to 6</td><td></td></tr> <tr><td><i>Recurvirostra americana</i></td><td>G</td></tr> <tr><td><i>Phoenicopterus minor</i></td><td>B</td></tr> </table>	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	[3]	5 or 6 correct = 3 3 or 4 correct = 2 1 or 2 correct = 1
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																										

Expert solution:

(a) The feature that is only shown by the birds that is visible is the presence of feathers.

(b) Like I always mention, solving keys is based on the understanding of the concepts. So learn your concepts well to be able to solve the dichotomous key based questions