

# Unit A: Introduction to Poultry Science

## Lesson 3: External Anatomy of Turkeys

# Terms

- **Back**
- **Beak**
- **Beard**
- **Breast**
- **Caruncle**
- **Ear**
- **Eye**
- **Foot**
- **Keel**
- **Leg**
- **Neck**
- **Nostril**
- **Hock Joint**
- **Shoulder**
- **Shank**
- **Snood**
- **Spur**
- **Tail Coverts**
- **Tail**
- **Throat**
- **Toe**
- **Wattle**

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- I. Turkeys are large birds related to pheasants.
    - A. They lived almost 10 million years ago.
      - 1. Wild turkeys are native to wooded areas of North America.
      - 2. Turkeys are the only breed of poultry native to the Western Hemisphere.
      - 3. They were first domesticated in Mexico and brought to Europe in the 16th century.



**Wild Turkey**



**Wild Turkeys  
Strutting**





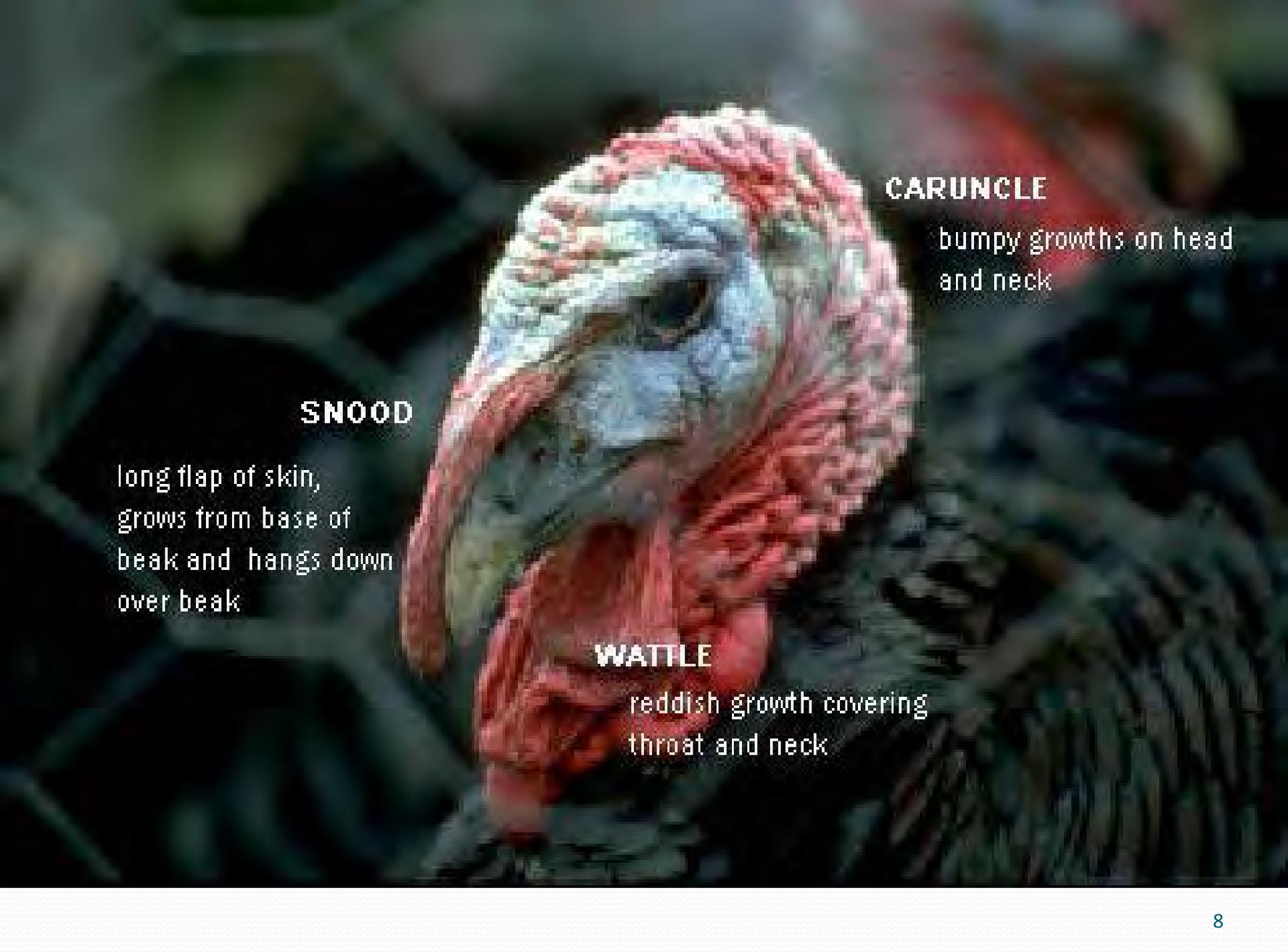
B. Turkeys are able to adapt to a wide variety of habitats.

1. However, most wild turkeys are found in hardwood forests with grassy areas.
2. Wild turkeys can fly for short distances at speeds up to 88 kilometers per hour.
3. On the ground they can reach speeds of 40 kilometers per hour.
4. Domesticated turkeys usually weigh too much to be able to fly.
5. Their weight is about twice the weight of a wild turkey.



**Wild Turkey Flying Up In Tree To Roost**

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- C. The caruncle is a brightly colored growth on the head and upper neck.
1. The snood is the flap of skin that hangs over the turkey's beak.
  2. The wattle is the flap of skin under the turkey's chin.
  3. The bare skin on the throat and head can change color from flat gray to shades of red, white and blue when the turkey becomes distressed or excited.



**SNOOD**

long flap of skin,  
grows from base of  
beak and hangs down  
over beak

**CARUNCLE**

bumpy growths on head  
and neck

**WATTLE**

reddish growth covering  
throat and neck

**Snood - the flap of skin that hangs over the turkey's beak. Turns bright red during courtship or when the turkey is upset**  
**Wattle - the flap of skin under the turkey's chin. Turns bright red during courtship or when the turkey is upset.**



**When we think of a male turkey we think of its snood being long hanging. What some do not know is, the wattle and the snood both retract and are not always long.**



**At times the snood is all shriveled up to a point.**

**As the turkey blows blood to his head his snood begins to grow.**



**When a male turkey fluffs up he is trying to attract a mate or show how beautiful he is. The snood is most likely used to attract a female because it looks like a long worm when fully grown.**



D. Turkeys have great hearing , but no external ears.

1. They have a field of vision of about 270 degrees and are able to see in color.
2. They can see movement almost a hundred yards away.
3. They don't see well at night.
4. They have a poor sense of smell, but a good sense of taste.



E. Male turkeys will start making their gobbling sound before sunrise and continue through most of the morning.

1. Hens make a clicking sound.

F. Turkeys are social animals.

1. They enjoy the company of other creatures, including humans.

2. They love having their feathers stroked.

- G. In the spring, male turkeys puff up their bodies, spread their tail feathers, grunt and make their gobbling sound to attract as many females as possible.
1. After mating, the female turkey prepares a nest under a bush in the woods and lays her eggs.
  2. She will lay one egg each day until she has a complete clutch of about 8 to 16 eggs. The eggs are tan and speckled brown eggs.
  3. It takes about 28 days for the chicks to hatch.
  4. After hatching, the babies will flock with their mother all year.
  5. The first two weeks they won't be able to fly and the mother will roost with them on the ground.



**Strutting Turkey**

H. Today, many advances have been made in the genetics of turkeys.

1. This has helped to increase the size of the bird with lesser feed and in lesser time.
2. The white broad-breasted turkey has been the most common commercially raised turkey breed, since the 1960s.
3. There are also different strains of the white broad-breasted turkey that are reared in different parts of North America.
4. Turkeys are bred specially to have more meat in the breast and thighs.
5. White feathered turkeys are generally preferred, since they do not leave any ugly pigment spots when plucked.

- I. Turkeys take around 4-5 months to grow to full size.
  1. Birds less than 8 months of age are known as young turkeys.
  2. The hen turkeys take 16 weeks to mature completely, and average around 3.6 to 7.3 kgs in weight.
  3. The tom turkey takes around 19 weeks and weighs anywhere between 7.3 and 10.9 kgs.
  4. Larger tom turkeys may weigh up to 18 kgs.
    - a. These take a few more weeks to mature.
    - b. A breeder tom turkey can generate up to 1,500 poults in a hen's six-month laying cycle.



5. The feet and shank portions of the legs have scales and most turkeys have three or four toes with claws used in scratching.



- J. Turkeys are covered with feathers but have a few vestigial hairs scattered over the body.
  1. The average consumer does not see these hairs, because they are singed off in the processing plant
- K. The turkey has a beak and does not have teeth.
  1. Any mastication occurs in the gizzard.
  2. Many commercial poultry producers do not provide grit to their turkeys, because they feed a ground feed of fine meal consistency that can be digested by the bird's digestive juices.

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- L. Turkeys have both white (breast) and dark (legs, thighs, back, and neck) meat.
    1. The wings contain both light and dark fibers.

II. The anatomy of a turkey includes a study of both external and internal parts. Both can influence the way birds grow, reproduce and need to be managed.

A. The following external parts help describe the chicken:

- 1. Back.** The back is the dorsal part of the bird between the bases of the wings and from the neck to the tail. It is homologous to the human back.
- 2. Beak.** The hard, protruding portion of a bird's mouth, consisting of an upper beak and a lower beak.

3. **Beard.** A male turkey grows a cluster of long, hairlike feathers from the center of its chest.
4. **Breast.** The breast is the upper front part of a bird. Underneath the breast is where the major flight muscles are located which are then attached to the wings to help the bird lift its own weight. The muscles are attached to an enlarged breastplate which is a skeletal part unique to birds.
5. **Caruncle.** Fleshy growths on the head of both males and females.

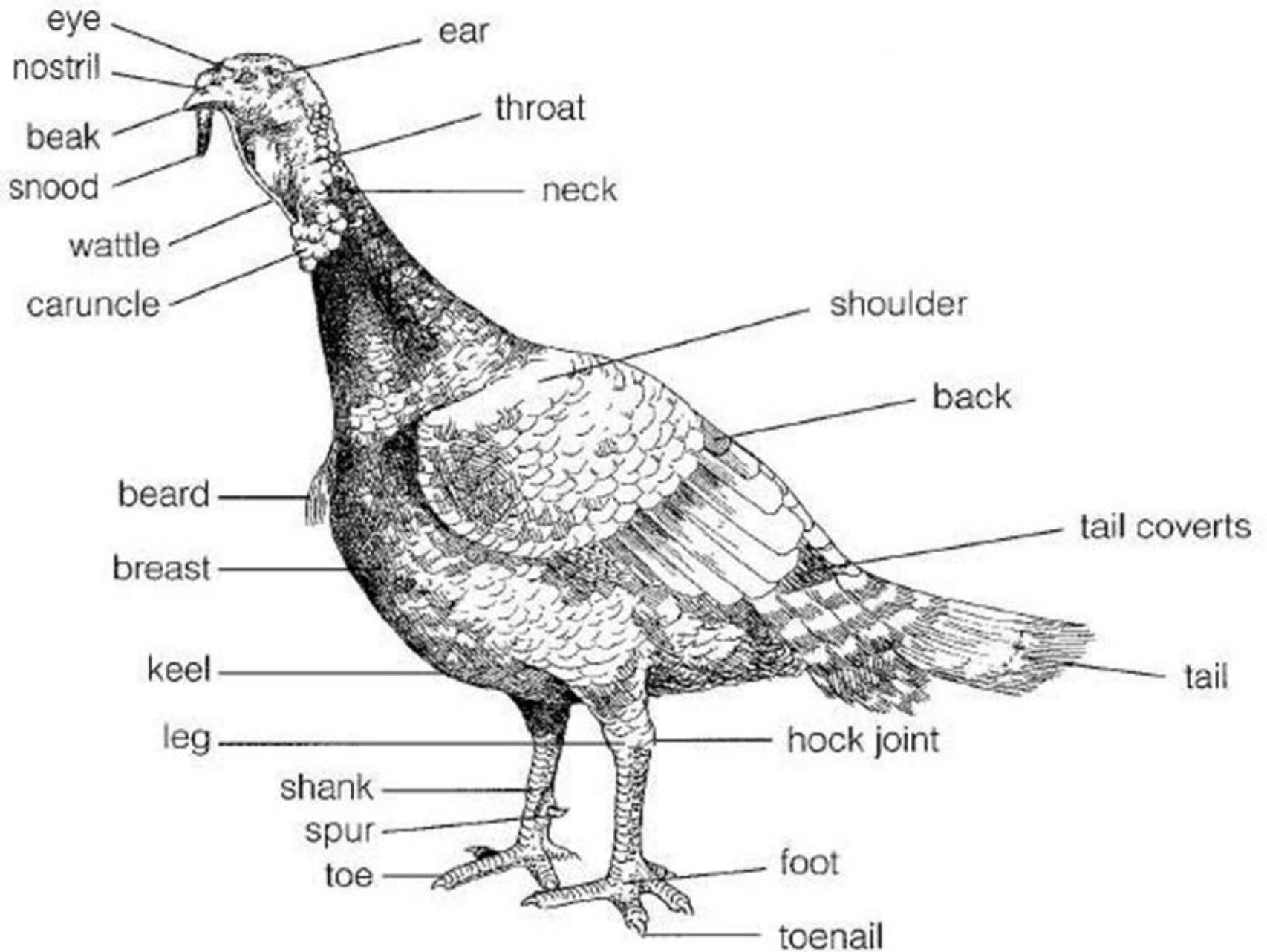
6. **Ear.** Responsible for maintaining equilibrium as well as sensing sound.
7. **Eye.** An organ of vision or of light sensitivity.
8. **Foot.** The feet are located at the terminal part of the legs, just like in humans, and most birds have four toes.
9. **Keel.** Also known as the sternum or breast bone it is so large that it forms much of the bird's ventral body wall.
10. **Leg.** The legs are limbs used for supporting the bird, homologous in function to the human legs. Proportionally the bird's legs are extremely strong in order for it to be able to land and take off without getting injured.

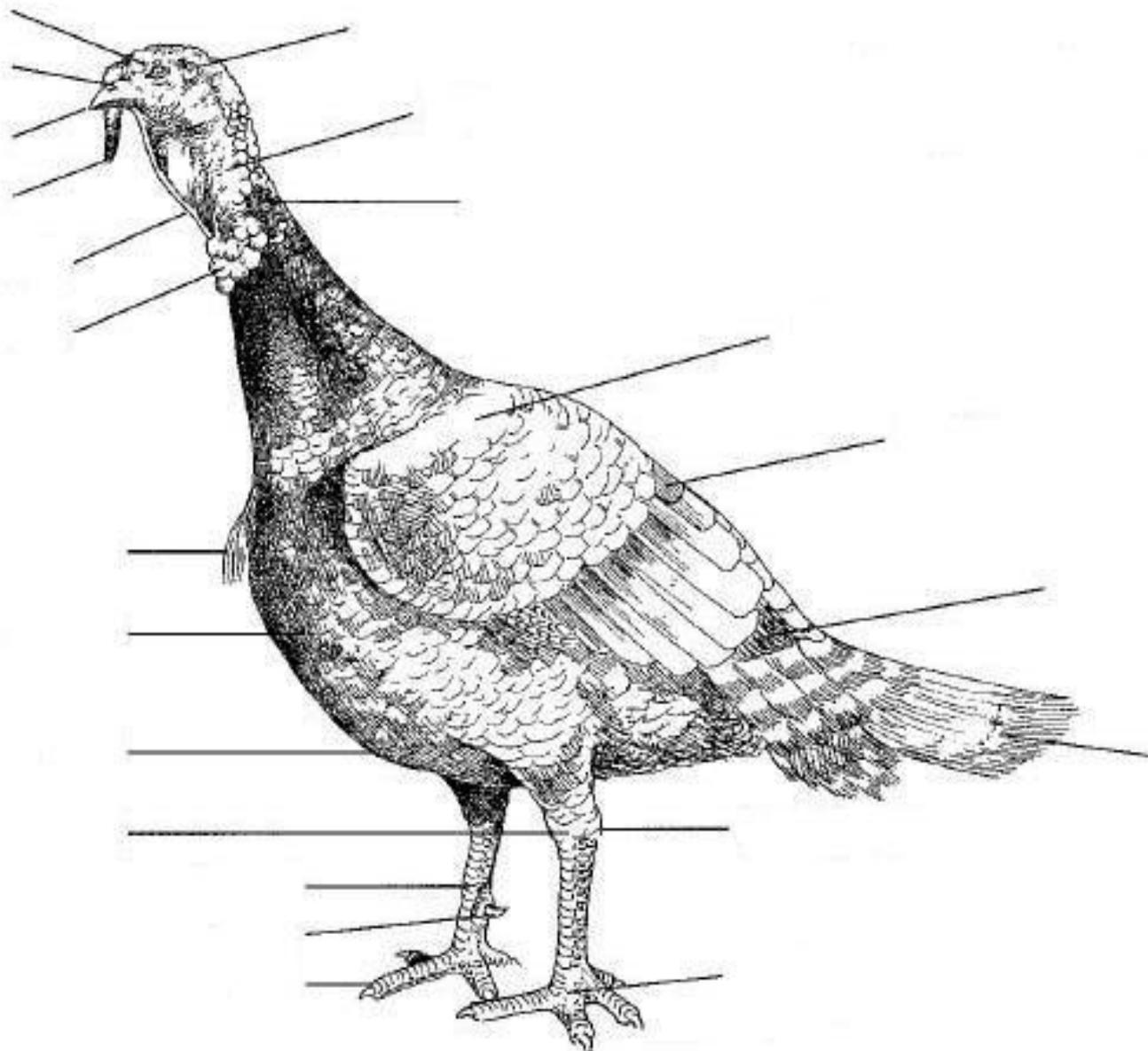
- 11. Neck.** The neck connects the head to the body of the bird, homologous to the human neck. Different species have different neck lengths. The neck allows the bird to move his head to increase its visual area without moving his body.
- 12. Nostril.** External openings on the top of the beak and their function is to warm air on inhalation and remove moisture on exhalation.
- 13. Hock Joint.** A joint in the leg of a domestic fowl.
- 14. Shoulder.** The shoulder refers to the relatively short feathers overlying the median secondary coverts on the top of the wing. They are located near the back and can be seen as the “first row” of feathers on the bird’s wing. They are also called marginal coverts and lesser secondary coverts.

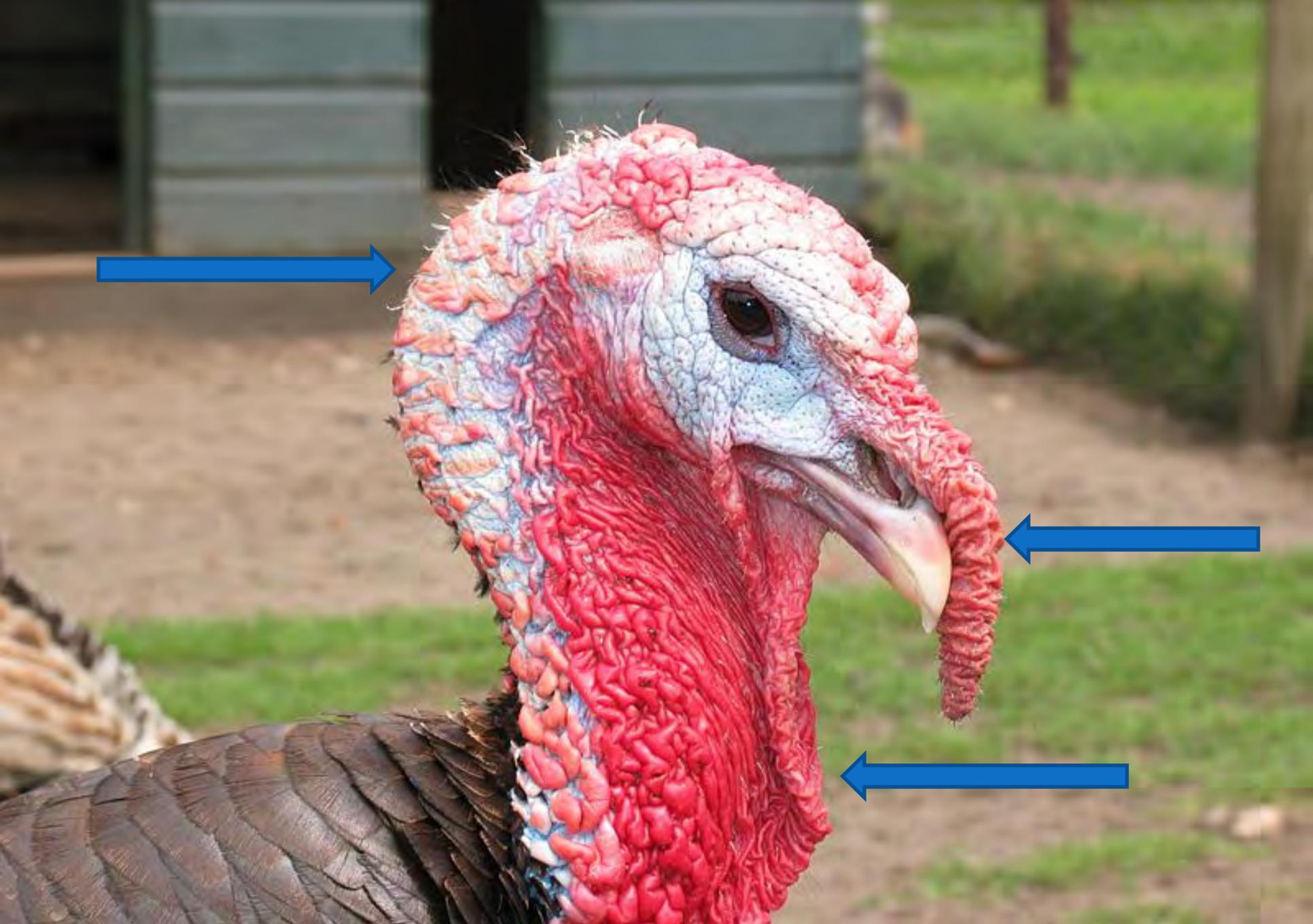
- 15. Snood.** Found on both males and females it is the fleshy protrubances that hang over their bills and can be extended or contracted at will. The snood of an adult male is usually much larger than that of a female. No one knows for sure what these growths are for, but both probably developed as ways to attract mates.
- 16. Shank.** The part of a turkey's leg between the spur and the first joint.
- 17. Spur.** A sharp horny growth on the leg of a chicken.
- 18. Tail Coverts.** The tail coverts are the shorter tail feathers covering the bases of the long extending tail feathers.

- 19. Tail.** The tail comprises of long feathers extending from the rear of the bird and is used for balance and as an asset to attract potential mates. Certain species have extremely elaborate tail feathers, such as peacocks, which serve no other purpose than to convey a positive message to a female during courtship.
- 20. Throat.** The throat is similar to the human throat and is located the front of the neck. It is often called jugulum, foreneck or throat patch. Internally, it contains the main food passage from the bird's bill to its stomach as well as air passages to the lungs.
- 21. Toe.** The toes are digits attached to the feet just like human toes. Most birds have four toes. The first toe points backwards while the other three toes point forward. The second, third and fourth digits or toes are counted from the inside of the foot out and have 2, 3 and 4 phalanges respectively. Most birds do not have a fifth toe, except for some where it has evolved into a defensive spur, such as in the turkey.

**22. Wattle.** The red or purplish flap of flesh that dangles under a turkey's chin.







# Review/Summary

- What is the function of the snood?
- Explain how and why a Tom turkey would strut?
- What are some of the distinguishing characteristics between toms and hens?
- How many external parts of a turkey can you identify?