

# Aural Abscesses in Box Turtles

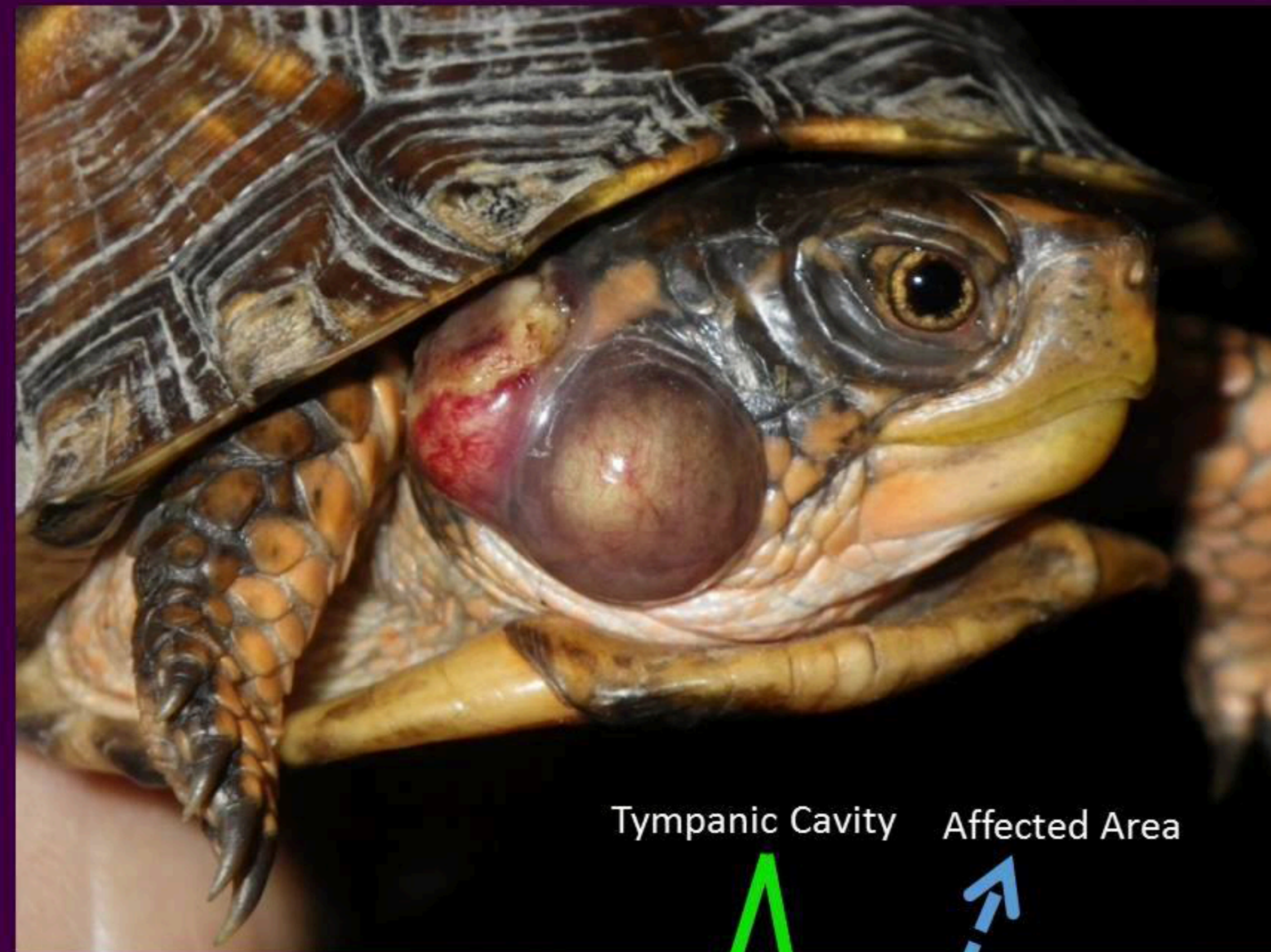
Turtles and tortoises do not have external ears. Instead they have a tympanic membrane (eardrum) that is nearly contiguous to surface of the skin, residing at the base of the head, right before the neck starts. It is identifiable by its slightly indented, oval shape.

Box turtles, both in the wild and captivity, are susceptible to getting aural abscesses, infections of the middle ear. When infected, the tympanum will look swollen and irritated. This is caused by infection of the lining of the middle ear, which creates a firm, cheesy plug in one or both middle ears. If serious enough, it could lead to extreme debilitation of the box turtle, especially if the infection settles into the upper respiratory tract.

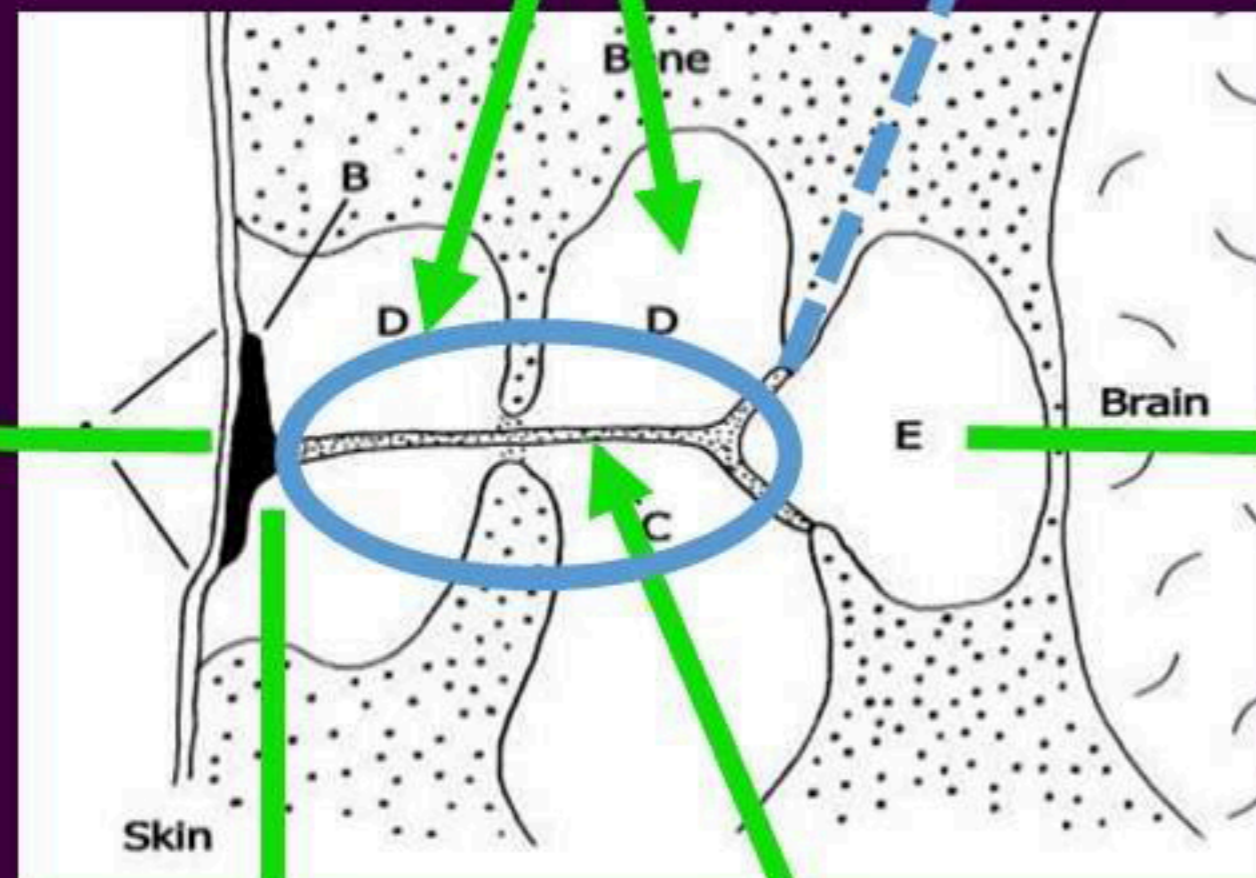
Ear infections in box turtles have been tied to vitamin A deficiency. Vitamin A is needed for maintaining the health of the lining of the middle ear. In the case of low levels of vitamin A, abnormalities may occur in the lining of the middle ear as well as problems of the skin, eyelids, and in some cases, even the respiratory tract. This is why it is common to see box turtles with both a swollen ear and eyelid. Specific to the ear, a lack of vitamin A will cause the lining of the ear canal, or columella, to thicken, allowing for bacteria to settle in and cause infection.

Other than poor dietary habits, box turtles may develop a vitamin A deficiency from exposure to organochlorine compounds (found in pesticides). These compounds block the vitamin A receptors in the body, preventing the turtle from absorbing it and therefore creating a deficiency over time. Recent research has tied exposure to pesticides containing organochlorine compounds to increased risk of ear infections in box turtles.

*Box turtles have been witnessed to overcome these infections on their own in the wild. They are strong animals and, much like ourselves, will wait it out and rely on their immune system.*



Tympanic Cavity    Affected Area



Inner Ear

Extracolumella    Columella (middle ear)