

THE GREAT OUTDOORS



Vulture Culture, Part I

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For years I have been delivering presentations on *Vulture Culture*, all over the state. It's proved to be interesting and a great deal of fun. Vultures exist worldwide and they're deeply ingrained in many societies. The service that they provide to the environment and to humans is indisputable. They are one of nature's cleanup crews. In fact the demise of the vulture in India was one of the greatest conservation travesties of all time, and highlighted their important role in the natural world.

Their Latin name, *catharses aura*, can be loosely translated to mean "purifying

breeze.” As a cleanup crew they help protect us from the carcinogens that are present in decaying matter. Like other carrion-eating birds, they have a very sophisticated immune system that enables them to eat rotting meat without getting sick. Strong stomach acids are in part responsible for killing bacteria. They are even immune to the bacterium spores of anthrax, and scientists have studied them looking for solutions to botulism.

In our Southern NJ regions we have two species of vultures: the turkey vulture and, in the past 20 – 30 years, the black vulture from more southern states has also taken up residence.

Some Middle Eastern and Asian cultures actually employ vultures in the disposal of human bodies. In Tibet this practice is called *sky burials*, and although it may seem foreign or disgusting to a Westerner, the idea of a body being devoured and carried to the heavens is quite spiritual. Some Eastern societies would look on our burial of Aunt Erma as very odd indeed. We pump her full of chemicals and keep her refrigerated so the relatives can come from far and wide to view her body and say, “Doesn’t she look lovely, I always liked that dress.” My purpose is not to be

irreverent but rather to get you to think outside the box – yes, pun intended.

In the Middle East and India some sects like the Zoroastrians use Dakhmas, or Towers of Silence. They place their dead atop platforms that look like a short silo perched on a hilltop for the vultures to do their cleansing work.



Zoroastrian Tower of Silence (Dakhma), near Yazd, Iran, traditionally used for the ritual exposure of the dead to the sun and birds of prey. Photo credit: Mauro Gambini.

For us vultures are usually seen as a harbinger of death. How many of you can remember that in westerns, before the shoot-outs, we would see them circle the Okay Corral. This is misleading because they do not kill their prey but rather eat carrion. When you see them circling it would more likely mean that something is already dead.

Let's look at the effects that losing vultures had in India, where cows are

revered. There are worldwide sales of beef deriving from India but most Indians are vegetarians. Of the estimated 500 million head of cattle there, only 4 % are destined for consumption by humans. Cattle are used for many more products and purposes alive than dead. Milk production, pulling of carts, hulling grains, and dung are important. We could do an entire article on how Indians use cow pies. Commodities like fertilizer, mortar, and concrete are all dung-based. I walked on a concrete floor at an Indian farmhouse that was highly polished and quite nice. I also read an article explaining that former rural dwellers will even pay for a cow pie to be sent into the city.

When a cow dies in New Delhi it is taken to a rural disposal area. As many as 15,000 vultures could once be observed cleaning up the carcass. To shed light on how quickly this can happen, we fielded a dead deer to attract eagles and vultures for a children's program. In about 24 hours all the meat was GONE. After two days I presume the coyotes were responsible for carting off the bones as well!

Back to the dead cow disposal site. At some point, cattle with inflammation disorders were routinely given a drug

called Diclofenac. This was stored in the tissues of the animal such that vultures were accidentally poisoned after consuming the meat from a treated carcass. Even one exposure to Diclofenac could kill a vulture. Once all the vultures were gone, thousands of wild dogs carried disease from the carcasses and rabies is now also a problem; 500,000 people are treated for it each year. In India a person is bitten every 2 seconds and one dies every 30 minutes.

Diclofenac was developed by Ciba-Geigy (now Novartis) in 1973. It took scientists a long time to recognize its effect on non-target animals, and when they did it was too late. By 1999 a massive decline of 3 species of vulture had taken place in India, Nepal, and Pakistan. In 2006 the drug was banned in India. Like most chemical bans it took a long time to take effect, and other countries like Spain continued to authorize the use of the drug where 80% of European vultures live. There are recovery efforts being undertaken by Indian wildlife officials but because of the vulture's characteristics it is a difficult species to raise in captivity, and it is costly.

Furthermore, in Africa poachers of big game are poisoning vultures because

these birds' presence discloses their evil deeds. But when animals stampede they often drown near river beds, and without these cleanup crews, water supplies are exposed to toxins.

Next week we will get into some more particulars about our local vultures. For now I hope you are gaining some insight into how they serve us and the natural world.

Part II

One of my favorite cartoons is of a group of vultures hunched over the carcass of a clown in the desert; one vulture turns to the other and says, "I dunno, does this taste funny to you?"

Last week I gave you an introduction to the importance of vultures in our natural world and some glimmer about their cultural significance as well. Today, I would like to explore some very interesting facts about these local denizens. We have estimated that as many as 600 turkey vultures live in Bevans Wildlife Management in southern Millville, and in the surrounding forests. More recently black vultures have taken a liking to southern NJ as well. This more southern species is speculated to be

increasing in our region due to climate changes.

Vulture numbers have grown in the last 50-100 years. Animal road kills are thought to play a part in this increase, since they eat only carrion and are opportunistic. They rely on the demise of an animal for a meal and are not capable of attacking like their raptor compatriots. Their feet are more like a chicken's than the talons sported by hawks. Being an opportunistic feeder means they must conserve energy because they can't capture their food, although they can survive on one meal a week.

This energy conservation strategy is responsible for a great many of their behaviors, and therein lies my fascination with vultures. Much to some people's dismay they occupy large night roosts and often return for many days or even years. On the roost they drop their body temperature, slow their heartbeat, take on a hypoactive state, and become slightly hypothermic. Their droppings have an odor. Also some people are simply creeped out by vultures because of cultural associations as harbingers of death.

When they wake up they don't immediately take to the sky; rather

they assume a heraldic pose with wings outstretched to warm up. They often choose dead trees so that sunlight doesn't have to penetrate leaves to reach them. Their dark feathers absorb the sun's rays and they take to the sky only when they have shed the chill from their dormancy. When they fly they ride thermals, or the heat rising from the earth. They are very lightweight, about 3 lbs., for their size (6' wing span), making sustained flight easier. It often seems like they will fall from the sky rather than give in to a flap of the wings. This teetering makes them easy to spot and identify from other raptors.

On field trips we tell people that their wings are held in a slight "V" as in "Vee is for vulture." This wing position is known as a high dihedral, and northern harriers also hold their wings in a similar position. In flight at a distance this and its small head make a vulture identifiable from other raptors such as hawks or eagles. The vulture's head is also featherless but this is not necessarily apparent from afar. However, the naked head does little to make them more endearing; in fact I often say they have a face only a mother could love. But know this: if your head were often in a bloody carcass, bald would be better!



While their vision is not as good as other birds of prey they have an excellent sense of smell, unlike most feathered species. They can detect a carcass within 12-24 hours of death. In fact German police use trained vultures to find missing bodies, and gas line workers observe vultures to detect ethyl mercaptan escaping along lengthy gas lines, since mercaptan and decaying meat are similar in odor. Vultures will hang out near landfills and houses with gas leaks for the same reason.

Okay, here's one for the road. Two lazy vultures board a plane with a dead 'possum in tow. The stewardess inquires, "May I have your luggage

placed below in the hold?" To which the vultures reply, "No, thanks; that's our carri-on." Bada – bing.