
Identification of Golden Eagles in Flight



Tussey Mountain Spring Hawkwatch

www.tusseymountainspringhawkwatch.org

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Overview

The distinctive feature of the Tussey Mountain Spring Hawkwatch is the high numbers of Golden Eagles (GEs) that pass each spring – the highest seasonal and daily counts in the eastern U.S.

Eagles frequently challenge the identification skills of hawk-watchers, and high winds, cold temps and poor lighting can also contribute to difficult viewing conditions. Although some eagles at Tussey will be directly overhead, others will be at high elevation, or even below the ridgetop. Others may soar far off over Stone Valley to the south or glide past well off the ridge on its north side. Scan frequently in multiple directions to pick up birds that are not following the expected path along the ridgetop. In high winds eagles will pass rapidly, giving only a short time for ID.

The following collection of pics will aid in differentiating GEs from other raptors, particularly Bald Eagles and Turkey Vultures, and in dividing GEs into three age classes: Juvenile, sub-Adult, and Adult (although the last two can be very difficult to distinguish without a good topside view). The pictures emphasize *shape and a variety of flight positions under poor lighting conditions*. More often than not, field marks and color are difficult to see, so shape and flight style are the most reliable ways to identify GEs in the field.



Don't expect too many topside views like this at Tussey! You'll see a lot more overhead. Both of these are adult GEs.

Note that you can see light gray banding/mottling in the tail that may look whitish in direct sunlight, but you do not see *bright* white. Both these birds shows tawny upper wing coverts. This feature is shared by both sub-adults and adults, but is not present in juveniles. It can be very difficult to age GEs without seeing the upper wing and tail.



More typical viewing angles at Tussey than those on the previous slide. The bird at left appears to be a juvenile, judging by lack of molted flight feathers and white at base of tail and flight feathers. Most of the GEs seen at Tussey are adults or sub-adults.



Topside view of a juvenile GE



Same bird a few minutes later

Note the bright white and distinct dark terminal band on the tail feathers and lack of tawny wing coverts. The white wing patches (visible on the underside) are highly variable in size.

This particular bird (photographed at Hawk Mountain in Nov 2007) has unusual small white patches on its shoulders – birds like this have been seen at Tussey



Soaring GEs have a distinctive shape – long wings, long tail, small head, short inner secondaries and longer central secondaries, resulting in a somewhat S-shaped curve to the trailing wing edge



Distant soaring GEs showing their distinctive wing shape
– GEs soaring to the south over Stone Valley on light winds will look like this



GE – unknown age,
Tail and head proportions rule out BE

This particular bird does not show the pronounced S-shape to the trailing edge of the wing, although the first pic shows the trailing edge of the wing pinching in slightly at the body.



Classic shapes of GEs gliding along a ridge under cloudy conditions – note the long wings held a bit osprey-like (BEs also have similar drooping wing tips)



More gliding GEs



Other angles



Two birds passing together - the bird at right is at an odd angle and appears rather large-headed like a bald eagle



If you miss an approaching eagle, you may get only a brief going-away look – these appear to be adult GEs. From above, note light upperwing coverts and light gray at base of tail – three spots of light



Subadult Bald Eagles - GEs never show white or off-white on the body or face – also note the large-headed and heavy-bodied look



Left: Juvenile BE – head and tail proportions not right for GE, also white on underwings is in the axillars (wing pits), rather than at the base of the primaries and secondaries. Juvenile GE would show bright white in the tail with a distinct dark terminal band

Right: another juvenile BE, but at this approach angle, looking much like a GE



More juvenile BEs

Left: gliding - note short tail

Right: different bird soaring, showing the large headed look vs. that of a GE

GE vs BE - soaring



GE vs immature BE - gliding



GE vs immature BE – gliding away





TVs are proportionally similarly to GEs. The soaring profile of the center bird is like that of a GE in light wind conditions. The wing shape of the bird on the right is GE-like, except that it does not have the characteristic shortened inner primaries of the GE. The tiny head of the TV is a good fieldmark but viewing angle affects apparent size (left pic vs. right).

Check each approaching TV carefully, it may turn out to be a GE upon closer look (and vice-versa)!

Additional ID information and much nicer photos can be found in references such as:

- Ligouri's article in the June 2004 issue of *Birding*
- Dunne, Sibley, and Sutton's *Hawks in Flight* (has an excellent discussion of how to tell apart "large dark birds")
- Wheeler and Clark's *A Photographic Guide to North American Raptors*
- Ligouri's *Hawks from Every Angle*.
- Wheeler's *Raptors of Eastern North America*



For more info about Tussey Mountain see: www.tusseymountainsspringhawkwatch.org