Webinar Lesson Plan
Critical Writing / Critical Thinking
September 2009—Who is Doing What to Whom? Narration as a Revision Strategy

a)

[1]Although the Second World War marked a turning away from inorganic chemicals as pesticides into the wonder world of the carbon molecule, a few of the old material persists. [2]Chief among these is arsenic, which is still the basic ingredient in a variety of weed and insect killers. [3]Arsenic is a highly toxic mineral occurring widely in association with the ores of various metals, and in very small amounts in volcanoes, in the sea, and in spring water. [4]Its relations to man are varied and historic. [5]Since many of its compounds are tasteless, it has been a favorite agent of homicide from long before the time of the Borgias to the present.

b)

[1]For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death. [2]In the less than two decades of their use, the synthetic pesticides have been so thoroughly distributed throughout the animate and inanimate world that they occur virtually everywhere. [3]Residues of these chemicals linger in soil to which they may have been applied a dozen years before. [4]They have entered and lodged in the bodies of fish, birds, reptiles, and domestic and wild animals so universally that scientist carrying on animal experiments find it almost impossible to locate subjects free from such contamination. [5]They have been found in fish and remote mountain lakes, in earthworms burrowing in soil, in the eggs of birds—and in man himself. [6]For these chemicals are now stored in the bodies of the vast majority of human beings, regardless of age. [7]They occur in the mother's milk, and probably in the tissues of the unborn child.

c)

[1]The akikiki forages on trunks, branches, and twigs of live and dead trees, primarily ohia and koa and occasionally in subcanopy shrubs (Foster *et al*. 2000). [2]It feeds on insects, insect larvae, and other arthropods taken from bark, crevices, dead wood, and epiphytes by gleaning, probing, and rarely by excavation (Foster *et al*. 2000; VanderWerf and Roberts in press). [3]The nesting season of the akikiki extends primarily from March-June (Foster *et al.* 2000) but recent information indicates nesting may occur from January to July in at least some years (VanderWerf and Roberts in press). [4]Few akikiki nests have been found, but all have been located in the crowns of ohia trees 4-12.5 m (13-41 ft) above ground and were composed of moss, small pieces of bark, bits of lichen, and fine plant fibers (Eddinger 197sa, Foster *et al.* 2000, VanderWerf and Roberts in press). [5]Both sexes help build the nest and feed the nestlings, but incubation has been

observed by the female only, and the male feeds the female during nest construction, incubation, and brooding (Eddinger 1972a, Foster *et al*. 2000, VanderWerf and Roberts in press). [6]There is no information about nest success, reproductive rates, survival of adults or juveniles, or movements (Foster *et al.* 2000, U.S. Fish and Wildlife Service 2006).

d)

[1]Prairie dogs begin breeding their second year. [2]In some parts of the species' range, females may have up to three litters per year and average six young per litter. [3]Breeding appears to be highly synchronous in a given area and juveniles are often identifiable to cohorts. [4]Prior to publication of a study in 2005, no evidence of nests, nesting material, or lactating females with young had been found in burrows. [5]Recent studies have found that natal burrows are constructed by prairie dogs. [6]Ricketts et al. (2002, pp. 17-18) provide information on seven natal burrows found in Surdow Valley, Michigan. [7]Females were observed digging and subsequently back-filling burrows with soil. [8]Fine grasses, shredded sagebrush bark, and hair were the primary components used in the nesting material.

e)

[1]According to the petition, this species occurs in a small geographic range and has declined rapidly over the last 50 years from an estimated 6832 ± 966 individuals in 1970 to a current estimate of 1364 ± 401 individuals. [2]Predation, disease, and habitat loss and degradation are the primary threats to the akikiki, and are all derived from the introduction of invasive alien species. [3]The International Union for the Conservation of Nature (IUCN) has categorized the akikiki as critically endangered; however, the species currently has no protection under the Migratory Bird and Treat Act.

f)

[1]The Kauai Creeper, or akikiki, primarily suffers from a lack of habitat loss and /or degradation. [2]Encroachment from invasive plant species has reduced the native habitat and vegetation. [3]Other threats include the uprooting of native vegetation from feral hogs along with predation from non-native mammalian species. [4]The onset of climate change has intensified hurricanes and storms and has increased the introduction and spread of mosquito-borne disease.

g)

[1]The petitioner(s) indicates the akikiki warrants listing because it has a small population, occurs in a small geographic range, and is undergoing rapid declines in population and range. [2]They also claim that varieties of threats are currently affecting its continued existence and existing regulatory mechanisms do not adequately protect it. [3]Primary threats to the akikiki include habitat loss and

degradation caused by invasive plants and feral ungulates, disease spread by introduced mosquitoes, predation, and catastrophes such as hurricanes. [4]It has no protections under the Migratory Bird Treaty Act and the International Union for the Conservation of Nature categorizes it as critically endangered.

h)

[1]In order to determine "harm," the regulation requires demonstration of a causal link or relationship between a specific activity or series of activities and the injury or death of listed species. [2]Injury may be shown through a variety of methods and types of evidence. [3]Field surveys and assessments, population studies, or laboratory studies might be used. [4]The effect of an activity might be measurable using physical evidence and scientific instruments. [5]The introduction of toxic chemicals can be evaluated through chemical analysis of water samples.

i)

[1]Analysis of sedimentation patterns was performed by the Monitoring Study Group of the California State Board of Forestry. [2]They demonstrated that timber harvest roads and their associated watercourse crossings are among the largest contributors to sedimentation of fish-bearing streams. [3]Mass landslides and other failures typically related to road-building and maintenance activities produced the highest sediment delivery to streams when compared to other erosion processes.