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7 June 2002

Mr. Colin Herrick
130 Rathburn Way
Santa Cruz, CA 95060

RE: Curran Property (APN 059-041-24) at 640 & 650 Coast Road in Santa Cruz
Presence-Absence Survey for the Endangered Ohlone Tiger Beetle

Dear Mr. Herrick:

At the request of your real estate agent, Linda Charman of Vanguard Realtors, I visited the above-noted property on May 11th, 2002 to search for the Ohlone Tiger beetle. This beetle is recognized as an endangered species by the U.S. Fish & Wildlife Service.

SITE DESCRIPTION

Figure 1 illustrates the location of the Curran Ranch on the relevant portion of the USGS topographic map. The property measures about 72.6 acres. Horses currently graze at the site. A single-family residence, barn, and associated appurtenant structures are the only buildings at the property.

The primary vegetation at the site is grassland, which is comprised of a mixture of native and non-native species of grasses and forbs. The central portion of the site is characterized by a canyon. Blue gum (*Eucalyptus globulus*) and Monterey Cypress (*Cupressus macrocarpa*) grow on the canyon bottom, while coastal scrub vegetation, dominated by Coyote brush (*Baccharis pilularis*), grows on the canyon walls.

Soils at the project site consist primarily of Bonnydoon-rock outcrop complex (116 and 118), Watsonville loams (177 and 179), and Elkhorn sandy loam (133). The identification and occurrence of these soils was mapped by Bowman *et al.* (1980).

BACKGROUND INFORMATION

The Ohlone Tiger beetle (OTB) was described in 1993 by Freitag, Kavanaugh, and Morgan (1993). Their description of this new species was based on specimens collected from three sites in west central Santa Cruz County between 1987 and 1992. Subsequently, the beetle has been found at the Vine Hill Elementary School in Scotts Valley, Pogonip Park next to the UC Santa Cruz campus, Wilder State Park, and the Kinzli (now Gross-Poliski) property, located at the south end of Meder Street in Santa Cruz.

This species appears to be restricted to coastal terrace situations, at low to mid-elevations (less than 1,200 feet), located between the crest of the Santa Cruz Mountains and the Pacific Ocean. On these terraces *Cicindela ohlone* inhabits areas characterized by remnant stands of native grassland. California oatgrass (*Danthonia californica*) and Purple needlegrass (*Stipa pulchra*) are two native grasses known to occur at all six sites. Within these grasslands, the beetle has been observed primarily on level ground, where the vegetation is sparse or bare ground is prevalent. Mima mounds are a common topographic feature associated with this type of grassland habitat.

The soil type, as mapped by the Soil Conservation Service (Bowman, *et al.* 1980), at all locations known to support the tiger beetle is Watsonville loam, which consists of shallow, poorly drained clay or sandy-clay soils that have accumulated over a layer of bedrock. This soil type has also been referred to as Santa Cruz Mudstone (Freitag, Kavanaugh, and Morgan 1993). Because the larvae and to a lesser degree, the adults of all tiger beetle species live much of their lives in earthen burrows, every species is usually associated with a specific soil type.

The diurnally active adults and larvae of *C. ohlone* are associated with sunny areas of bare or sparsely vegetated ground. Both adults and larvae are voracious predators. Collection records indicate that most adult *C. ohlone* are active from late January through early May (BUGGY Data Base 2001).

The U.S. Fish & Wildlife Service (2001) recently recognized the OTB as an endangered species. Additional information on the OTB is presented in this rulemaking.

SURVEY METHODS

I visited the property on May 11th, 2002, and surveyed the entire project site by hiking throughout it. Bowman *et al.* (1980) indicate that the Watsonville loam soils occur on the flatter, grassland terraces at the property. I searched for the OTB adults and others signs of it, such as adult emergence burrows, larval burrows, and oviposition burrows. Since the OTB is strictly associated with grassland vegetation, I looked for barrens or areas of sparse vegetation, preferably characterized by native bunch grass, that are favored by the OTB, at the property. Where such areas were found, I then examined the ground for evidence of burrows and adult beetles.

SURVEY RESULTS

Seven adults of the Ohlone Tiger beetle were observed along a trail located in the upper portion of the western meadow (above or north of the double-headed arrow in Figure 1). One had been stepped on, presumably by a horse, while the other six were actively sunning and hunting for prey. Three larval burrows were observed along a trail located in the upper portion of the eastern meadow. A bona fide larva of the OTB was observed in one of the burrows.

RECOMMENDATIONS FOR PROJECT PLANNING

Because the endangered OTB is present at the property, a permit for incidental take of the beetle will likely be required for any development of the site. I suggest that you contact the U.S. Fish & Wildlife Service in Ventura, CA (805-644-1766) to discuss this matter. Amelia Orton-Palmer is the Service biologist for the Santa Cruz area, and Colleen Sculley is in charge of incidental take permits. The upper meadows should be managed in a manner that will benefit the OTB.

I should also advise you that the Monarch butterfly, *Danaus plexippus* (Lepidoptera: Danaidae) has been known to overwinter in past years on the trees in the central canyon. Overwintering sites of the Monarch are protected by the Coastal Act and the Fish & Game Code. Thus any proposed development of the site should also be done in a manner that does not adversely impact the overwintering habitat of this butterfly.

REFERENCES

Bowman, R.H., *et al.* 1980. Soil survey of Santa Cruz County, California. U.S. Dept. of Agriculture and Soil Conservation Service in cooperation with the University of California, Agricultural Experiment Station Publication.

BUGGY Data Base. 2002. Report of sensitive insect and invertebrate species and their occurrences in the greater Santa Cruz (Santa Cruz County) area. Data base maintained by Entomological Consulting Services, Ltd., Pleasant Hill, CA.

Freitag, R., D.H. Kavanaugh, and R. Morgan. 1993. A new species of *Cicindela* (*Cicindela*) (Coleoptera: Carabidae: Cicindelini) from remnant native grassland in Santa Cruz County, California. The Coleopterists Bulletin 47:113-120.

U.S. Fish & Wildlife Service. 2001. Endangered and threatened wildlife and plants; endangered status for the Ohlone Tiger beetle (*Cicindela ohlone*). Federal Register 66: 50340-50349.

If I can be of further assistance, please contact me.

Sincerely,

Richard A. Arnold

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President

Attachment

Cc: Linda Charman, Vanguard Realtors

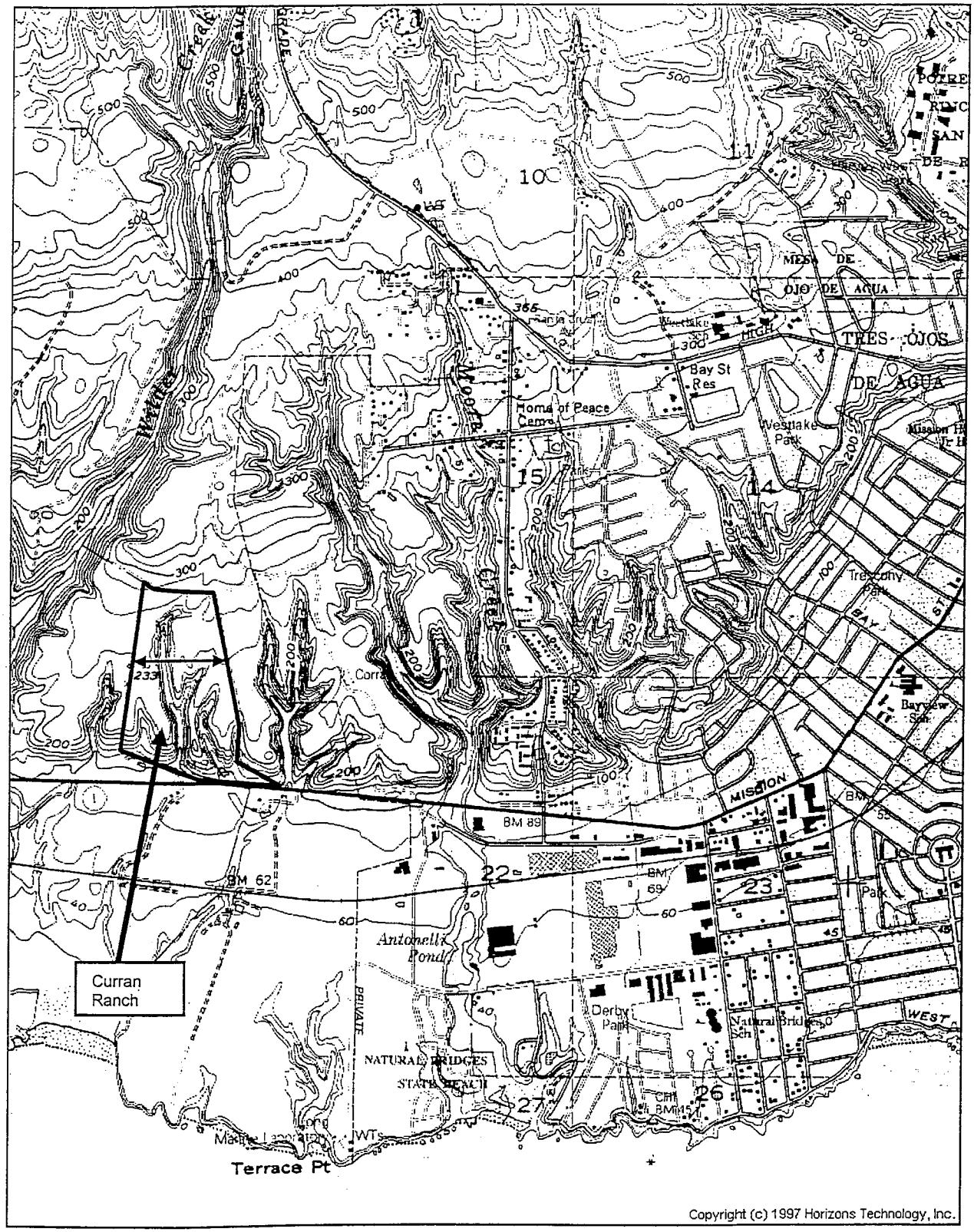

Fig. 1 Curran property and location of OTB habitat.