

# Entomological Consulting Services, Ltd.

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15 June 2004

Mr. Jerry Shanahan  
151 Thunderbird Drive  
Aptos, CA 95003

RE: APN 021-271-03 & 04, 021-281-01, 02, 05, & 06  
Pinnacle Pass Shopping Center in Scotts Valley, CA  
Habitat Assessment Report for the Endangered Mount Hermon June Beetle  
and Zayante Band Winged Grasshopper

Dear Mr. Shanahan:

This letter reports on the findings of my habitat assessment survey for the endangered Mount Hermon June beetle (MHJB) and Zayante Band Winged grasshopper (ZBWG) at the six above-noted parcels, which collectively form the Pinnacle Pass Shopping Center in Scotts Valley, CA. I can briefly summarize the findings of my habitat assessment by stating that neither the MHJB nor the ZBWG is likely to occur at this property. The remainder of this letter provides pertinent background information on the MHJB and ZBWG, and describes my survey methods and findings in greater detail.

## **Background Information.**

The MHJB is known scientifically as *Polyphylla barbata* (Coleoptera: Scarabaeidae) and was described in 1938 from specimens collected on Mount Hermon in Santa Cruz County. Of the 28 species of *Polyphylla* that occur in North America, the MHJB has one of the most restricted geographic ranges. It is found in association with Zayante sandy soils in the Felton-Scotts Valley-Mt. Hermon-Ben Lomond area of Santa Cruz County, CA, and is known only from these Zayante sandhills. Due to the beetle's limited geographic range, plus the historical and anticipated loss of habitat within its limited range, the U.S. Fish & Wildlife Service (USFWS) recognized the MHJB as an endangered species in 1997, pursuant to provisions of the federal Endangered Species Act of 1973 (FESA).

The Zayante sandhills support a sand parkland vegetation community that is the preferred habitat for the MHJB. This plant community is characterized by a mosaic mixture of Ponderosa pine, chaparral, and sparsely-vegetated areas of grasses, forbs and shrubs, several of which are indigenous to the Zayante sandhills.

Within these sandhills, the MHJB has been found at about 70 locations. A common feature of all known MHJB locations is the presence of Ponderosa pine, and for this reason it is a likely food plant of the MHJB larvae, which are subterranean and feed

on roots. Additional information on the MHJB can be found in the final ruling to recognize it as an endangered species (USFWS 1997) and its recovery plan (USFWS 1998).

The ZBWG is known scientifically as *Trimerotropis infantilis* (Orthoptera: Acrididae: Oedopodinae) and was described in 1984 from specimens collected near Mount Hermon in Santa Cruz County. It is found in association with Zayante sandy soils in the Mount Hermon-Felton-Scotts Valley-Ben Lomond area of Santa Cruz County, CA. Historically it has been found at about 20 locations in the Zayante sandhills. Due to the grasshopper's limited geographic range, plus the historical and anticipated loss of habitat within its limited range, the USFWS recognized the ZBWG as an endangered species in 1997, pursuant to provisions of FESA.

Within the sand parkland plant community that is indigenous to the Zayante sand hills, the ZBWG is restricted to areas of barren or sparsely-vegetated loose sands that are sunlit. Adults are usually active from about late-July through late October. There is a single generation per year. Additional information on the ZBWG can be found in the final ruling to recognize it as an endangered species (USFWS 1997) and its recovery plan (USFWS 1998).

#### **Project Site Description.**

Collectively, the six parcels that comprise the shopping center property measure about 4.12 acres in size. The center is located on the west side of Mt. Hermon Road at its intersection with Glen Canyon Road. Camp Evers Creek crosses the property near its northern border. Much of the property consists of buildings that house various businesses plus the paved access roads and parking lots. Undeveloped areas surround the property, especially on its southern and western sides, but the topography appear to have been graded or otherwise altered. Immediately surrounding properties on the west side of Mt. Hermon Road include an apartment complex and a utility yard.

Topography at the property is generally flat or gently sloping. Soils are Pfeiffer gravelly sandy loam or Danville loam as mapped by Bowman and Estrada (1980). Vegetation includes a combination of native and non-native plants. Ornamental plantings were observed near the businesses, while non-native grasses, trees, and shrubs predominate in surrounding undeveloped portions of the property. Acacia, pyracantha, broom, and annual grasses predominate in the upland areas. Riparian vegetation grows along the stretch of Camp Evers Creek that crosses the property.

#### **Survey Methods and Results.**

I visited the property on February 27<sup>th</sup>. No Zayante sandy soils were evident at the parcel. Neither sand parkland vegetation nor Ponderosa pine trees occur at the property. The closest off-site Ponderosa pine trees that were observed in the surrounding neighborhood occur on a slope above the Shell station located at the intersection of Mt. Hermon Road and Scotts Valley Drive, which is approximately 800 feet NNE of the shopping center.

Due to the absence of indigenous sand parkland vegetation and Ponderosa pine trees, I would not expect the MHJB or ZBWG to occur at this property. I have previously performed several presence-absence surveys for the MHJB and ZBWG at various properties located in or near this neighborhood. The closest known location of the MHJB is upslope of the aforementioned Shell station, while the ZBWG is known to occur near the Mt. Hermon Cross.

### **Conclusions and Recommendations.**

Habitat conditions at this property are not suitable to support breeding populations of the MHJB or ZBWG. Also, habitat conditions on neighboring properties are unsuitable to support breeding populations of either insect. Due to the absence of suitable habitat, plus the distances to the nearest known populations, I believe it is unlikely that either insect would disperse across the shopping center property. Thus, an incidental take permit should not be required by the U.S. Fish & Wildlife Service and no mitigation for potential impacts to these insects should be required for your project. However, I suggest that you contact Mr. Roger Root at the Ventura office of the U.S. Fish & Wildlife Service (806-644-1766) to confirm this.

### **References Cited.**

Bowman, R.H. and D.C. Estrada. 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 Publications. 148 pp. & maps.

U.S. Fish & Wildlife Service. 1997. Endangered and threatened wildlife and plants: determination of endangered status for two insects from the Santa Cruz Mountains of California. Federal Register 62:3616-3628.

U.S. Fish & Wildlife Service. 1998. Recovery plan for two insects and four plants from the Santa Cruz Mountains. Portland, OR. 63 pp.

Please feel free to contact me if you have questions about my survey findings or need further assistance with this project.

Sincerely,



Richard A. Arnold, Ph.D.  
President