Iris Koski
Tributary Biological Consultants
600 F Street, Suite 3 Box 754, Arcata, CA 95521.
707-535-9323

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Humboldt County
Cannabis Svcs.

23 June, 2019

Mr. Cliff Johnson
County of Humboldt Planning and Building Department
3015 H Street
Eureka, CA 95501

Iris Koski
Tributary Biological Consultants

SUBJECT: Giant fawn lily (*Erythronium oregonom*) presence on the Humboldt Sanctuary Property #221-071-020.

Dear Mr. Johnson,

Per your request, I performed a survey for the giant fawn lily (*Erythronium oregonom*) on behalf of Rick Cooper for Humboldt Sanctuary Farms on Humboldt County APN 221-071-020 on 3 April, 2019. I am an actively practicing local biologist with more than 15 years of experience conducting biological surveys and environmental permitting. I obtained my MS in environmental science in 2012 from Humboldt State.

The primary purpose of the field visit was to verify presence/absence of *E. oregonum* on the garden site and in areas immediately surrounding the garden or impacted by it. The visit was not an exhaustive search of the entire property, as the areas with previous occurrences of *E. oregonum* are beyond what would reasonably be impacted by the cultivation site. A thorough desktop review and field survey of biological resources were conducted.

E. oregonum life history and habitat requirements

The giant fawn lily is characterized by a pair of basal leaves that are often "fawn-like" (mottled) with wavy edges. The flowers are can be white to pink with yellow at the base, petals downfacing and recurved. They frequently occupy wooded riparian areas and meadows with moist soil and may also have a serpentine association. They are in bloom from March to June, but blooms are at their peak in April. The giant fawn lily closely resembles the coast fawn lily, *Erythronium revolutum*, and whether they are in fact separate species or if *E. oreganum* is simply a subspecies of *E. revolutum* is unknown. (Jepson 1993).

The State ranking for *E. oreganum* is S2- imperiled, and their CNPS ranking is list 2B.2. This list is for plants that are rare in California, but abundant elsewhere. They are eligible for state listing under CEQA guidelines Section 15225 (c) and Section 15380. While they are common throughout the Pacific northwest, *E. oreganum* occur infrequently in California and are limited to Humboldt, del Norte, and Siskiyou counties (Calflora.org).

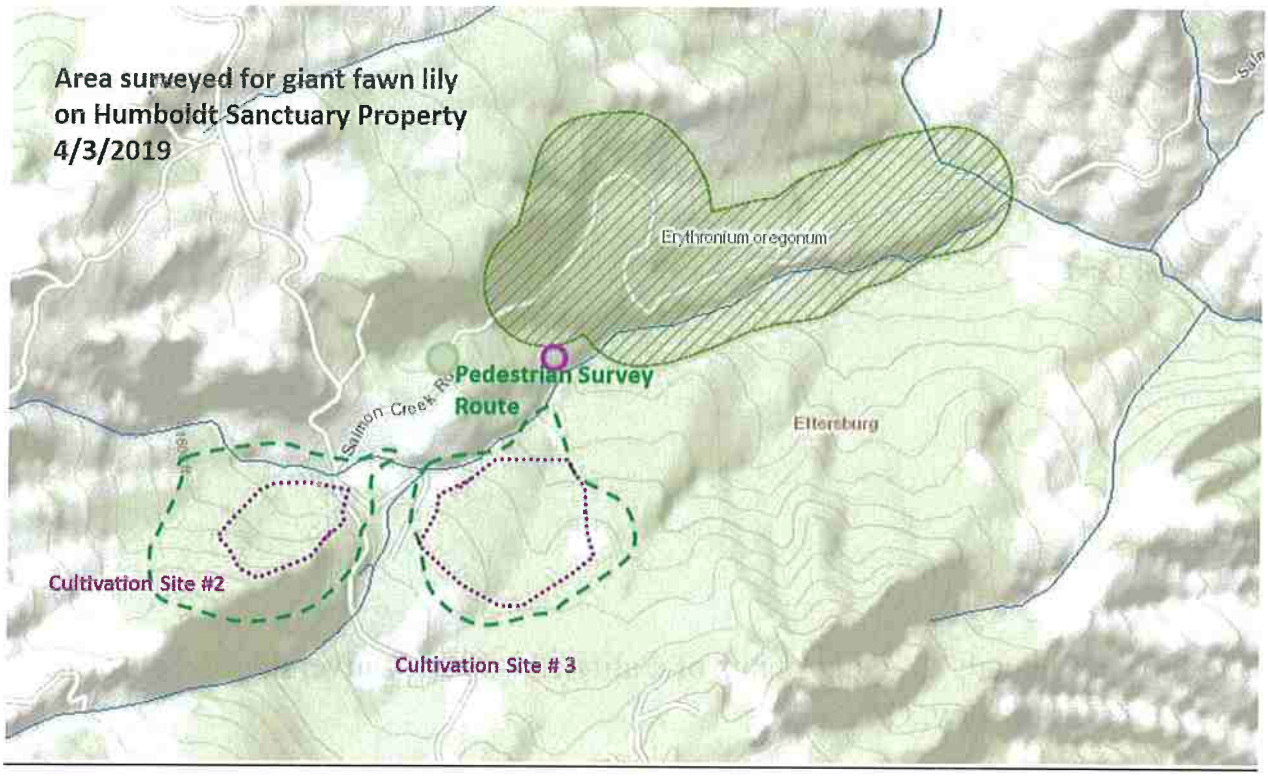
Methods:

I performed a pedestrian survey of Cultivation Sites #3 and #2 and a 200-meter buffer around the sites. I also walked the blue line creek to the north of the cultivation site near the documented CNDDB observations. The survey for the lily lasted approximately three hours. The pedestrian survey routes and location of the reference population are shown in Figure 1 below. The site visit was timed to coincide with peak inflorescence for this species.

Results

After a thorough search of the garden sites (Cultivation Site #3 and #2) and surrounding areas, I did not find *E. oregonom* or any other species of fawn lily to be present in those areas. I did find species that could be considered similar in appearance, such as fetid adder's tongue (*Scoliopus bigelovii),* fairy slipper (*Calypso bulbosa*) and Coast checker lily (*Fritillaria affinis*) all of which were in bloom at the time.

Figure 1. CNDDB location and pedestrian survey route on 4/3/19



Conclusions

While I did not find presence of *E. oregonom* on my search of the cultivation site and immediately adjacent areas, populations of this species may be present elsewhere on the Humboldt Sanctuary Property. I can say with high confidence that Cultivation Site #3 and Cultivation Site #2 do not support individuals or populations of this species and will not incur significant impacts upon any populations that may exist on the property. The small scale and sustainable nature of Humboldt Sanctuary Farms (see: garden relocation letter) will ensure that impacts are minimal and are tightly constrained within the garden footprint, preserving the integrity of any potential special status populations elsewhere on the property and surrounding landscape.

Please feel free to contact me with any questions you may have.

Regards,

Iris Koski, MS

References

The Jepson Manual: Vascular plants of California. 1993. University of California Press, Berkeley, CA.

"Erythronium oregonum | Oregon fawn lily | Wildflowers of the Pacific Northwest" *www.pnwflowers.com. Accessed on 4-21-2019.*

Appendix 1. CNDDB Species in the 1-quad (Ettersburg) area of Humboldt Sanctuary Farms.

Element_Type	Scientific_Name	Common_Name	Federal_Status	State_Status	CDFW_Status	CA_Rare_Plant_Rank
Animals - Amphibians	*Rana boylii*	foothill yellow-legged frog	None	Threatened	SSC	-
Animals - Amphibians	*Rhyacotriton variegatus*	southern torrent salamander	None	None	SSC	-
Animals - Amphibians	*Taricha rivularis*	red-bellied newt	None	None	SSC	-
Animals - Fish	*Oncorhynchus kisutch pop. 2*	coho salmon - southern Oregon /	Threatened	Threatened	-	-

		northern California ESU				
Animals - Fish	*Oncorhynchus mykiss irideus pop. 16*	steelhead - northern California DPS	Threatened	None	-	-
Animals - Fish	*Oncorhynchus mykiss irideus pop. 36*	summer-run steelhead trout	None	None	SSC	-
Animals - Mammals	*Erethizon dorsatum*	North American porcupine	None	None	-	-
Animals - Reptiles	*Emys marmorata*	western pond turtle	None	None	SSC	-
Community - Terrestrial	*Upland Douglas Fir Forest*	Upland Douglas Fir Forest	None	None	-	-
Plants - Lichens	*Usnea longissima*	Methuselah's beard lichen	None	None	-	4.2
Plants - Vascular	*Erythronium oregonum*	giant fawn lily	None	None	-	2B.2
Plants - Vascular	*Erythronium revolutum*	coast fawn lily	None	None	-	2B.2

Appendix 2. Site photos

1. Fetid adder's tongue (*Scolopius bigelovii*)

Photo 2. Fairy slipper, (*Calypso bulbosa*)

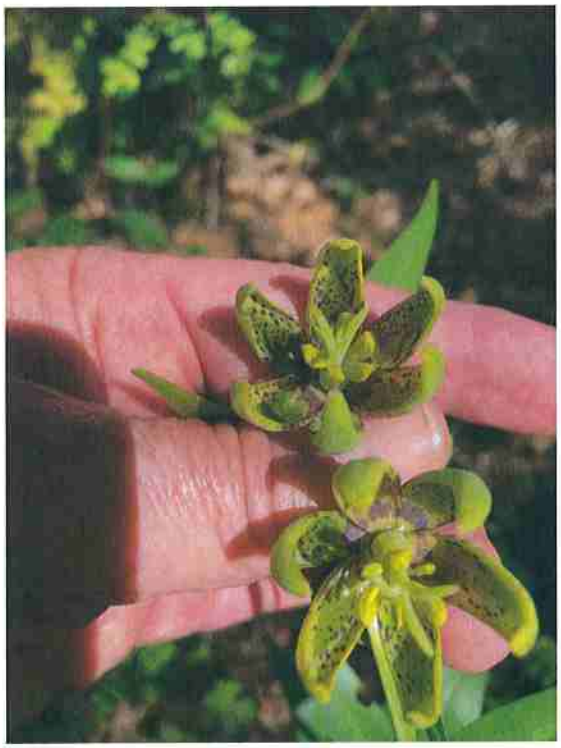



Photo 3. Coast checker lily (*Fritillaria affinis*)