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In Reply
Refer to:
6840

September 19, 1994

Memorandum

To: Vicki Snitzler-Neeck, Craters of the Moon N.M.
From: Steve Popovich, District Botanist
Subject: Findings of Carey Kipuka 1994 plant survey

As requested, this memo documents findings of my visits to Carey Kipuka last summer and personal opinions regarding future survey efforts.

Two visits were made to Carey Kipuka this past summer; one in May and one in June. From the list you had sent of reported plants on the Kipuka, I could confirm the presence of only a few common ones. This spring/summer exhibited a severely depauperate growing season due to high temperatures and low precipitation. There were very little forbs in flower and many annuals did not appear at all. It was an inadequate season to perform reliable surveys.

I recommend pursuing one final inventory effort of the kipuka. The kipuka is not very exceptional in its representation of unusual flora, and I feel there probably are not rare taxa present. It is very valuable, however, in representing several apparently ungrazed plant communities (reviewed by Tisdale et al in 1965 and by Moseley in 1989). Nonetheless, it is important to conduct a survey to attempt final resolution of the taxa reported and, equally importantly, to find new unreported species. Of particular potential are early annuals and non-vasculars. I feel survey efforts are especially warranted as the area has been nominated for special conservation status/recognition for its noteworthy vegetative attributes. The survey would need to be performed by a competent individual with verified collections a must. One full day on-site in March or April as soon as the first local area forbs are out, and again several weeks later, again in mid-May, and once in the end of June should cover it. It is probably not worth the effort of returning in fall for late bloomers. You are probably looking at \$100-150 per day for the survey. Using anyone less than fully competent for the area is a waste of time and money.

You may want to contact Paul Hosten under Neil West at Utah State University. As you may already know, he is re-reading permanent transects and he may have developed a verified species list. If so, it should become part of your permanent records of CRMO flora references.

I have personally asked most old-timers who used Laidlaw Park for grazing cattle or sheep before the BLM was formed as well as our most knowledgeable range staff as to the chance that the kipuka was grazed. No one knew of ever grazing the kipuka nor of any access other than the foot trail with which

we are all familiar. No rancher would recommend trailing sheep across the trail in summer, but over snow in fall is a possibility. We know that it has not been grazed for at least 30 years. Tisdale et al stated that it may have been grazed in the early 20th century by sheep in the fall or winter. If so, it was probably only a few times, but it may have impacted the kipuka. The cheatgrass invasion at the kipuka's summit is probably reflecting natural dynamics, but if it was grazed for even a short time, the summit is where sheep would have rested and impacts could be reflected in today's species composition.

I bring this up because I found a sheep wagon on sled runners inside North Laidlaw Butte and a bulldozed trail to that kipuka. No one ever heard of it being grazed either, but it clearly has been. The ramifications of historic grazing presence upon the use of kipukas for scientific research is obvious and needs to be carefully evaluated. When I flew over Carey Kipuka, I noticed what appeared to be a bulldozed trail coming from the southwest. It could be a natural lava tube or fissure, but it should be confirmed. I plan on looking into it this coming summer. A reconnaissance flight over Brass Cap Kipuka showed no signs of access and I believe that it has clearly never been grazed by livestock.

Before an additional survey is initiated, it may be beneficial to more closely examine the reports of unverified taxa occurring on the kipuka. Are the reports associated with verified specimens? Or are they from species lists made on the spot? Who made these lists? Tenured staff? Seasonal technicians? Perhaps some of the names can be verified or eliminated from this step alone. No matter the outcome, any plant name that remains unverified should not be dropped from a master species list of CRMO, but, rather, retained in a section like "unverified occurrences" with their references and an estimate of their potential to occur.

Following is a list of the questionable species from the kipuka or some from the general list and my input as to their potential to occur.

Allium acuminatum - its there.

Antennaria dimorpha - its there.

Antennaria stenophylla - its there.

Artemisia longiloba - likely, but should confirm not *A. arbuscula*.

Astragalus cibarius - likely, but confirm not *A. lentiginosus* or ally.

Astragalus scopulorum - no way, need to verify.

Balsamorhiza hookeri - its there.

Calochortus bruneanus - more likely *C. macrocarpus*.

Calochortus nitidus - more likely *C. eurycarpus*.

Calochortus nuttallii - also more likely *C. eurycarpus*.

Camassia quamash - unlikely; mis-ID of *Zigadenus*?

Carex filifolia - likely, but I didn't see it.

Castilleja longispica - possible, but likely *C. angust.* or *C. flava*.

Varieties of *Chrysothamnus* - sound correct but I didn't check.

Cirsium arvense - I think its there; this is a weed to control.

Cirsium undulatum - doubtful, a mis-ID?

Cordylanthus ramosus - its there.

Crepis occidentalis - probably there.

Cryptantha circumscissa - common everywhere.

Cryptantha watsonii - i don't know.

Fritillaria lanceolata - very unlikely, but I did see a *F. atropurpurea*, mid-way on sideslope to summit from study plots, that almost keyed to it. Should pursue further.

Grayia spinosa - occurs on BLM land nearby, could be in CRMO.

Haplopappus acaulis - should be there, but I didn't notice.

Koeleria nitida - common in Laidlaw Park & should be in CRMO.

Microsteris gracilis var. *gracilis* - found on district and should be at CRMO.

Nama densum - there is a *Nama* on the district near you; could be on CRMO.

Orthocarpus luteus - likely there.

Penstemon cusickii - likely there.

Penstemon speciosus - possibly there.

Poa nevedensis - probably there, but need to confirm from close allies.

X *Agrositanion saxicola* - this is just a hybrid between squirreltail and bluebunch. Its common in Laidlaw Park and I suspect it is there.

I hope this helps you in your future surveys or list updates. Feel free to contact me if you have any questions.

Steve