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Date of Call

Nov 15, 2018

Record of Telephone Conversation

Time of Call

2:15 pm Mtn Time

Incoming ☐

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Call ☐

Voice
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Rec'd
From

Date
Retrieved

Contact
Name

Dr. Mourad Gabriel

Phone #

707-845-7847

Affiliation

Integral Ecology Research Center

Other Info

Project

West Coast DPS of the fisher

Additional
Participants

Notes
of Call

I contacted Dr. Gabriel to discuss his continued work regarding the effects of toxicants to fisher populations (primarily California). I particularly was interested in his work relative to locations and other information of illegal marijuana grow sites. When I mentioned my discussions with the Forest Service and my LEIMARS data query/request, he said that these results will be "inadequate" and would not represent the best available data. He said that the reporting into this system is based on input from federal officers and this reporting is not always complete or covers all National Forest areas; in other words, it is dependent on the level of effort from the reporting officer(s). In addition, there are several additional and different law enforcement agencies that are collecting these types of data over the range of fishers. He and his colleagues have been compiling and are currently preparing a much more comprehensive representation of how many grow sites have been found, both on public and private lands, from 2009 through 2017 (that is, historical and contemporary areas). In connection with this, his group has been developing probabilistic models (Maxent and neuronetwork) to create a "threat matrix" for not just fisher, but also spotted owl and Pacific marten. He brought up an example of the southern Sierra region, in which LEIMARS indicated 20 sites, but County data will contain other grows, including private land locations. He emphasize that LEIMARS does not include private lands and that not all private (timber) companies are monitoring for these sites (no law enforcement presence); thus, the LEIMARS results will be an underestimate of historical and current sites. He has developed formal MOUs with various law enforcement agencies to receive these (raw) data, which he cannot release to others. However, he said a LEIMARS query/request to the Forest Service may be helpful; it's just incomplete, particularly for OR and WA, where Forest Service and others are not as proactive in searching for sites, and therefore less robust than what he is putting together. He also said that BLM has not been as active. He expects to have the results of his compilation by the end of January or early February. Since CFWO has created an updated map of populations in CA/OR/WA, I asked if our spatial data (shapefile) would help with his work and he said yes [files were sent Nov 16]. I asked him for this opinion related to any changes pre- and post-legalization of marijuana in California. He said that the footprint of the grows has changed. They are finding in 2017 and 2018 (post), that the sites are fewer, but have become larger, covering more area. This means that a site that used to cover 1-2 home ranges of fisher are now incorporating additional home ranges. Also, law enforcement actions have caused "dispersement" reducing detections.

Did we get?

Notes from Phone Call with Gabriel, 11/15/2018, continued:

He also mentioned results of policy changes related to pesticide use and additional restrictions place on the use of SGARs. He said they are now finding **less SGARs** being used at grow sites, but there is now **more intensive use of FGARs**. The "black market" is still there for growers to obtain these compounds, but the FGARs that are available at garden and farm stores are sold as a much larger bulk product and thus are **more expensive to consumers**. Thus, **consumers are not** likely to purchase these types of products for rodent control, but the growers are buying these very large (40 lb buckets) supplies for use at their sites. Usage of ARs is still high. In short, the **policy changes have been less helpful for conservation of species.**

Other relevant data being collected: (1) additional necropsy results [note – I have asked the CDFW vet about this and she will send me additional results that Dr. Gabriel does not have] and (2) field studies being conducted by another IERC researcher, Dr. Greta Wengart [prompted by my asking him about ecological factors that may be affecting exposure of fishers]. Dr. Wengart is trapping animals and setting camera traps at both grow sites and no-grow sites, and is evaluating reclaimed/mitigated sites to see if ongoing reclamation efforts are helping.

Preliminary data of the diversity and abundance of prey at grow sites suggest (not confirmed) that the **grow sites may be acting as sinks for prey** (whether by attraction to 'flavored' baits, plants, or water pipelines), which could mean less prey available for fisher overall. There may also be changes to potential predators of fisher [predation represents the highest mortality risk to fisher] so that fishers may now have more direct conflict with their predators (particularly bobcat).

Finally, he mentioned the very high cost of cleaning up/reclaiming sites, which he is actively involved in [documented in Gabriel et al. 2017 report], and the lack of funds (e.g. federal agencies) available/allocated for reclamation actions. There are still many legacy/historical grow sites that are contaminated with ARs and other chemicals. They are trying to prioritize reclamation of areas that contain fisher habitat and core areas for spotted owls.