

Diagnose of black grouse winter habitats



Wildlife and winter sport activities – Lescheraines – 3/4 March 2016

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Finger and
Tarsus feathery

Photo : Y. Magnani



Insulating feathers
Hyporachis

Photo : Y. Magnani



Igloo

Photo : B. Bellon

Well
adapted
to cold



Photo : B. Muffat-Joly

Winter survival strategy : Energy saving thought :

- Habitat selection with powder snow to make igloo
- Movement reduction





Where ? Between forest and alpin pasture
Also location of ski activities

Type of disturbances

Human disturbance



Habitat loss and fragmentation



Cable impact



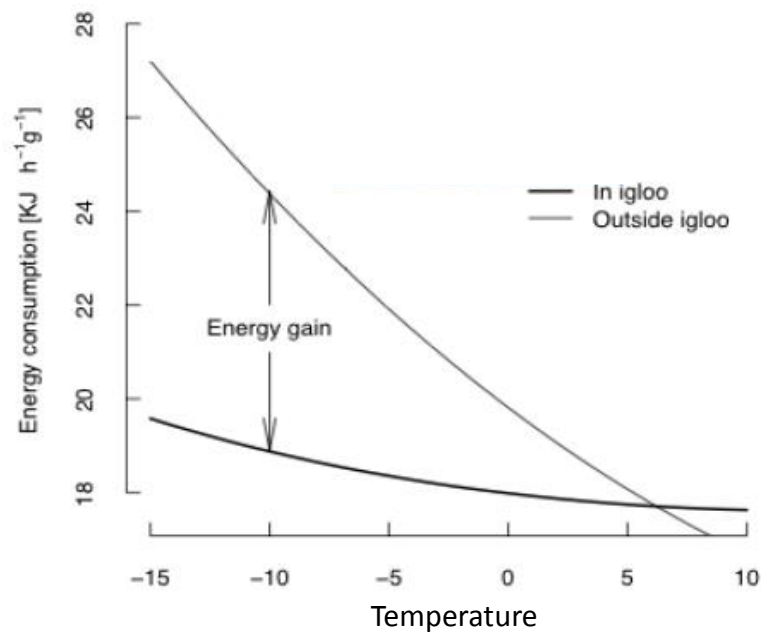
Photo : Arvin berod

Impact of human disturbance

Behavior

Energetik scale

Physical state of birds

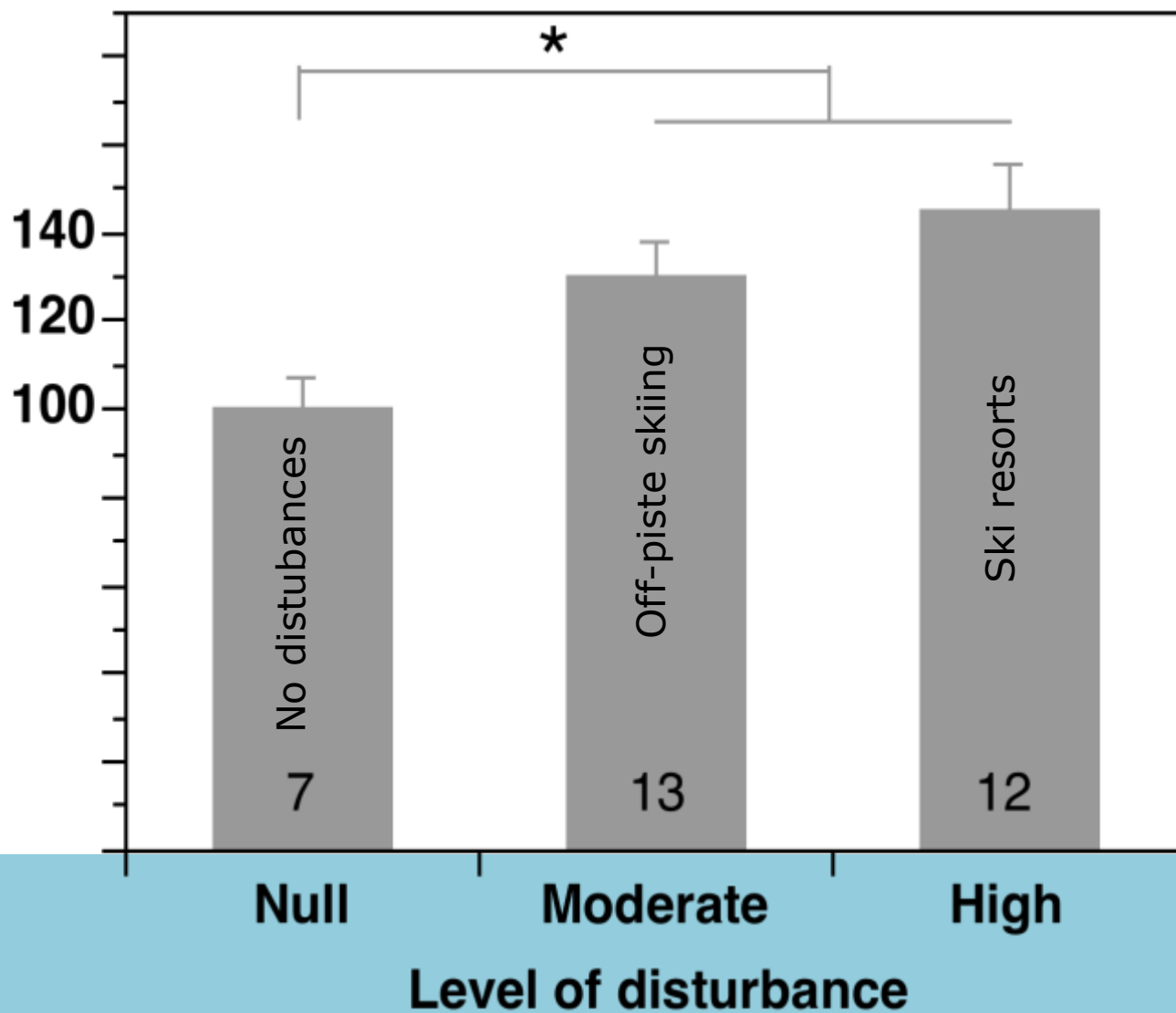


Energy loss



Photo : B. Bellon

Disturbance: stress increase



4 STEPS



1

Locate and qualify
winter sport
activities

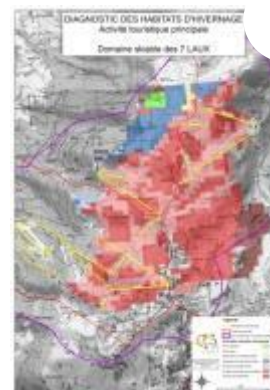
WINTER



2

Locate winter habitat
with «crottiers»
(faeces)

SPRING



3

Cross step 1
and 2 to
delimitate
black grouse
winter
protected area



4

Alert people and suggest habitat
conservation tools

Choice of the site

Alpine skiing resort :

1km buffer around skiing infrastructure
between 1400 and 2300 meters height (range where back goose is found)

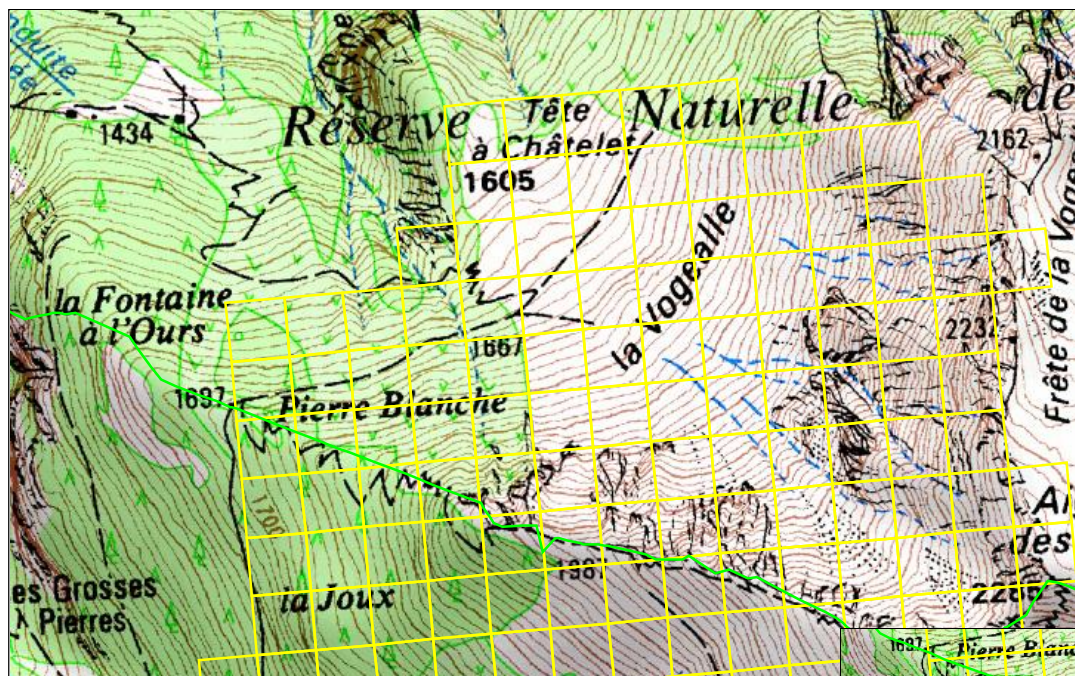
Nordic skiing resort :

1km buffer around skiing resort area
between 1400 and 2300 meters height

Out of skiing resort :

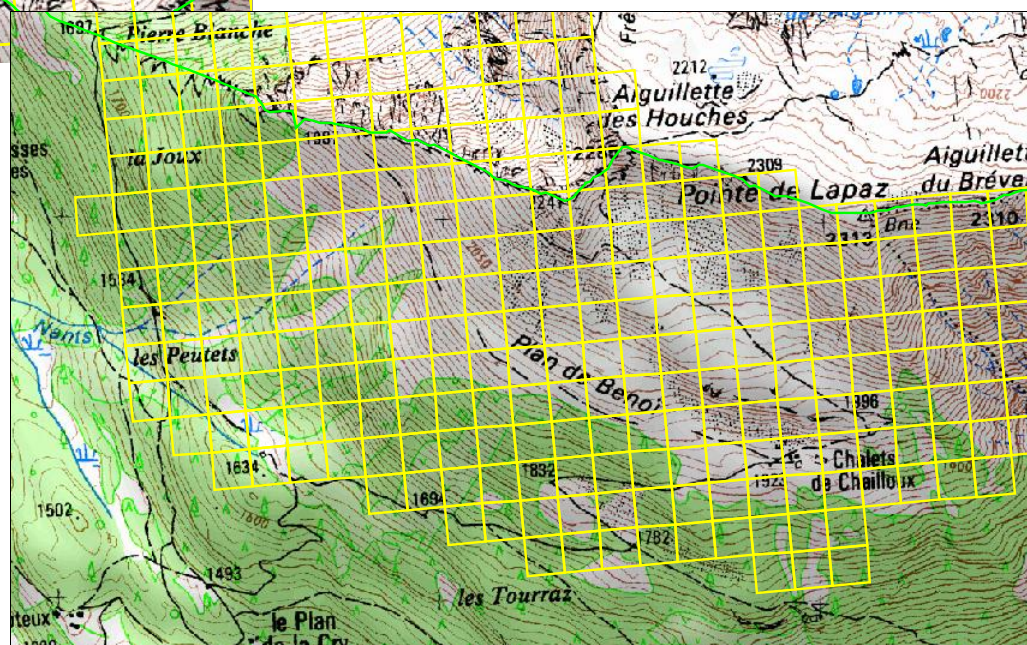
Chose a large area which take into account all the different paths
(departure point, carpark, topography)
between 1400 and 2300 meters height





Combe de la Vogealle

Why did we choose this area for the diagnose?



Cell of 100 m X 100 m

Chailloux



1st day



3rd day



7th day

About 7 days after the last snow fall
(at least one weekend)

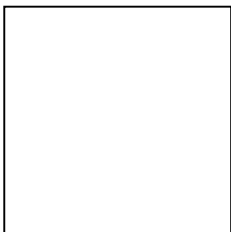
Between February and March
(According to snow conditions)

Diagnose of grid layer cells:

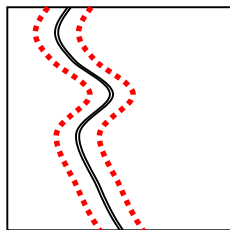
- Quantitative
- Qualitative



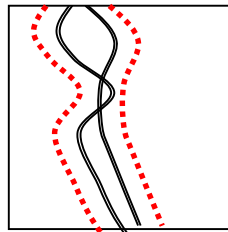
Quantitative: 5 activity intensity categories



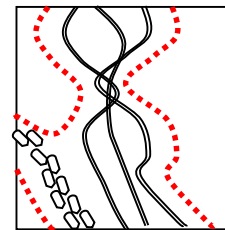
0 : nothing



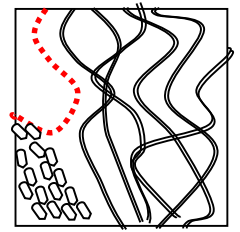
1 : $sd \leq 25\%$
of 1 ha cell



2 : $25\% < sd \leq 50\%$
of 1 ha cell






3 : $50\% < sd \leq 75\%$
of 1 ha cell

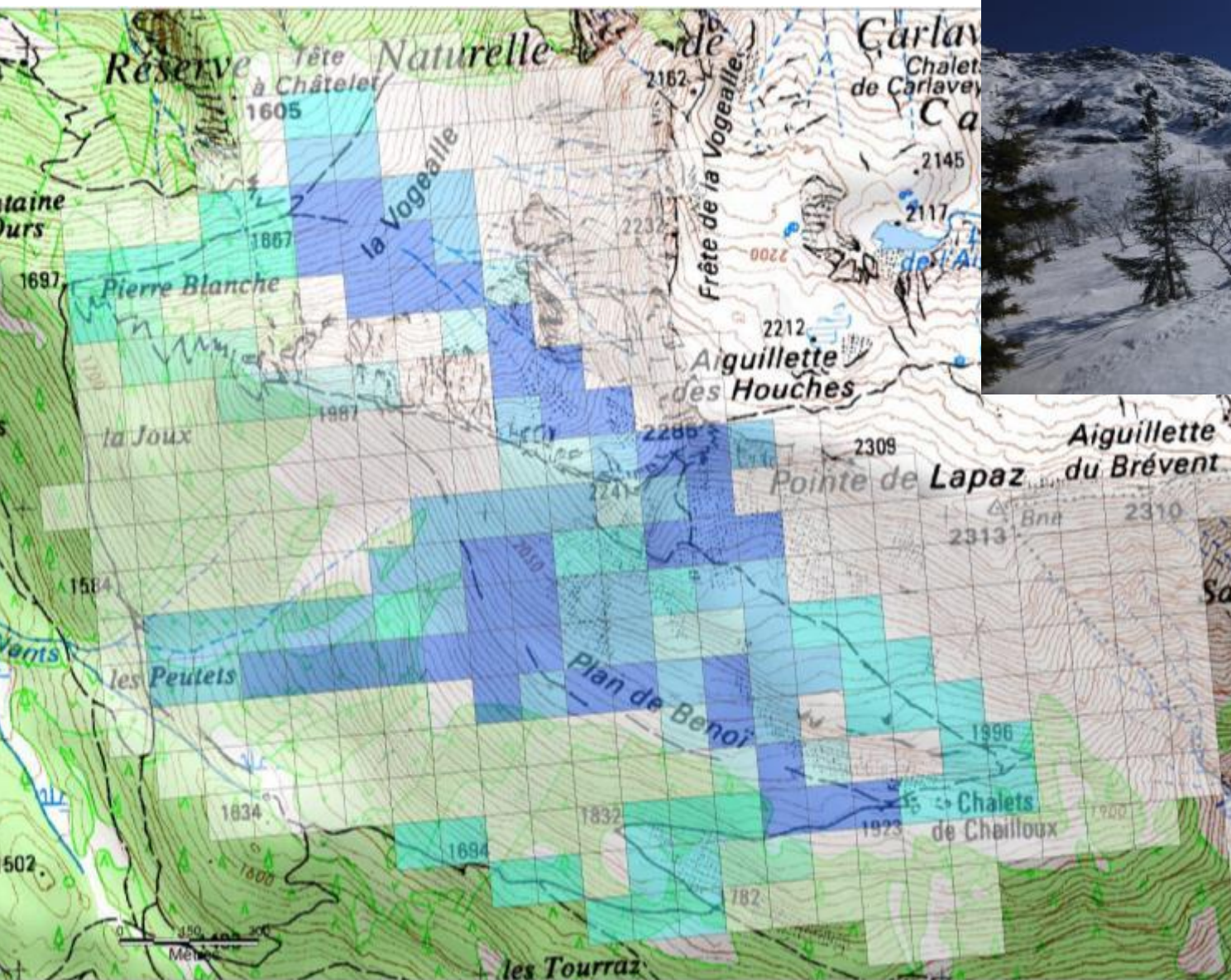


4 : $sd > 75\%$

Qualitative: Identification of type of activity

Code	Definition	Code	Definition
SD	Ski alpin sur piste damée Alpine skiing on path 	SH	Ski alpin hors piste par gravitation à partir des remontées mécaniques Alpine skiing out of path
FD	Ski de fond ou ski nordique sur piste damée Cross-country skiing on path	FH	Ski de fond de randonnée Cross-country skiing out of path
RD	Raquettes sur itinéraire balisé Snowshoe on path 	RH	Randonnée en raquettes hors itinéraire balisé Snowshoe out of path
SR	Ski alpin de randonnée Ski touring	PS	Promenade à pied Foot Walk
PT	Parcours de chien de traineau Sled Dog path 	AD	Déclenchement provoqué d'avalanche Avalanche

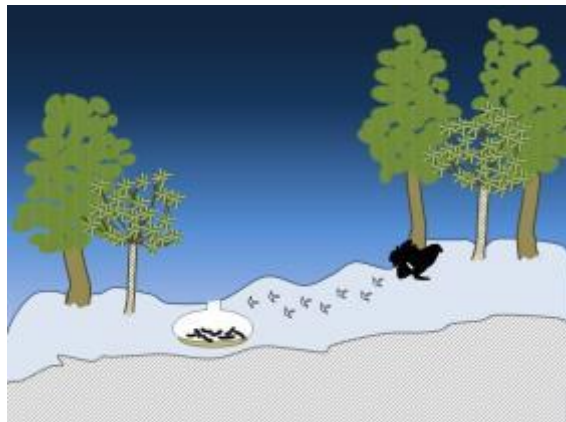
Result Step1: activity intensity



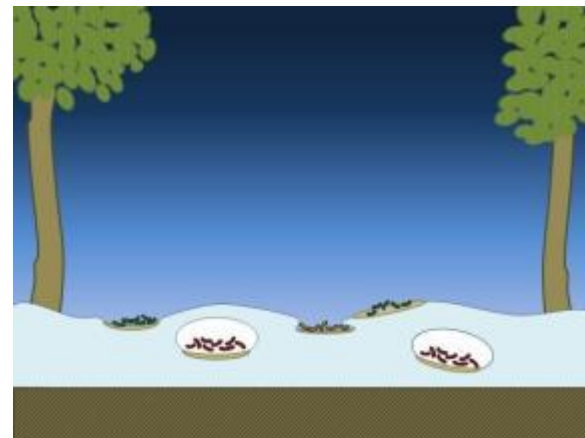
Activity intensity

- None
- < 25 %
- Between 25 - 50 %
- Between 50 - 75 %
- > 75 %

Step 2 – location of « crottier » faeces



Winter

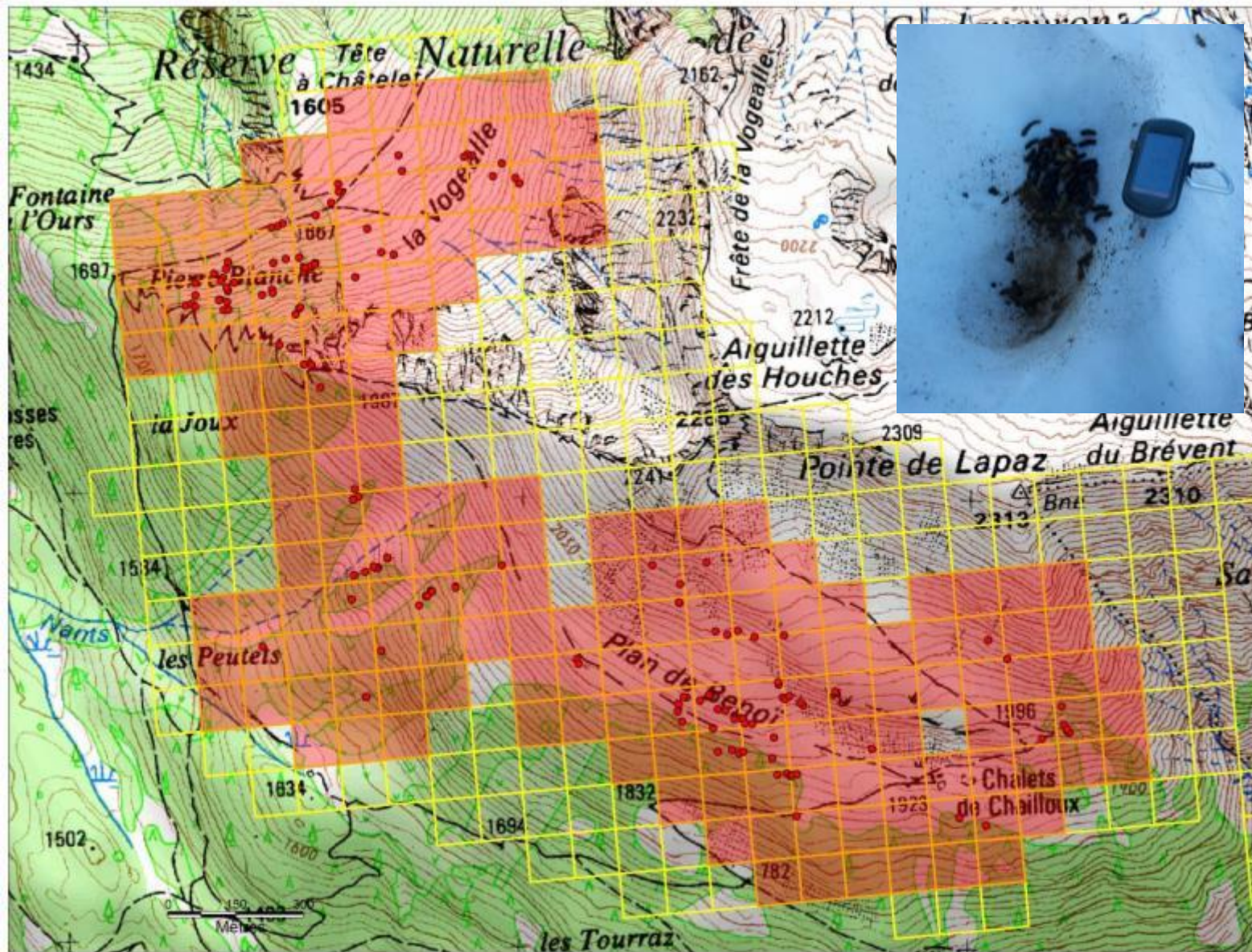


Spring

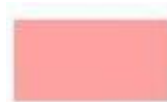
Step 2 – location of « crottier » faeces



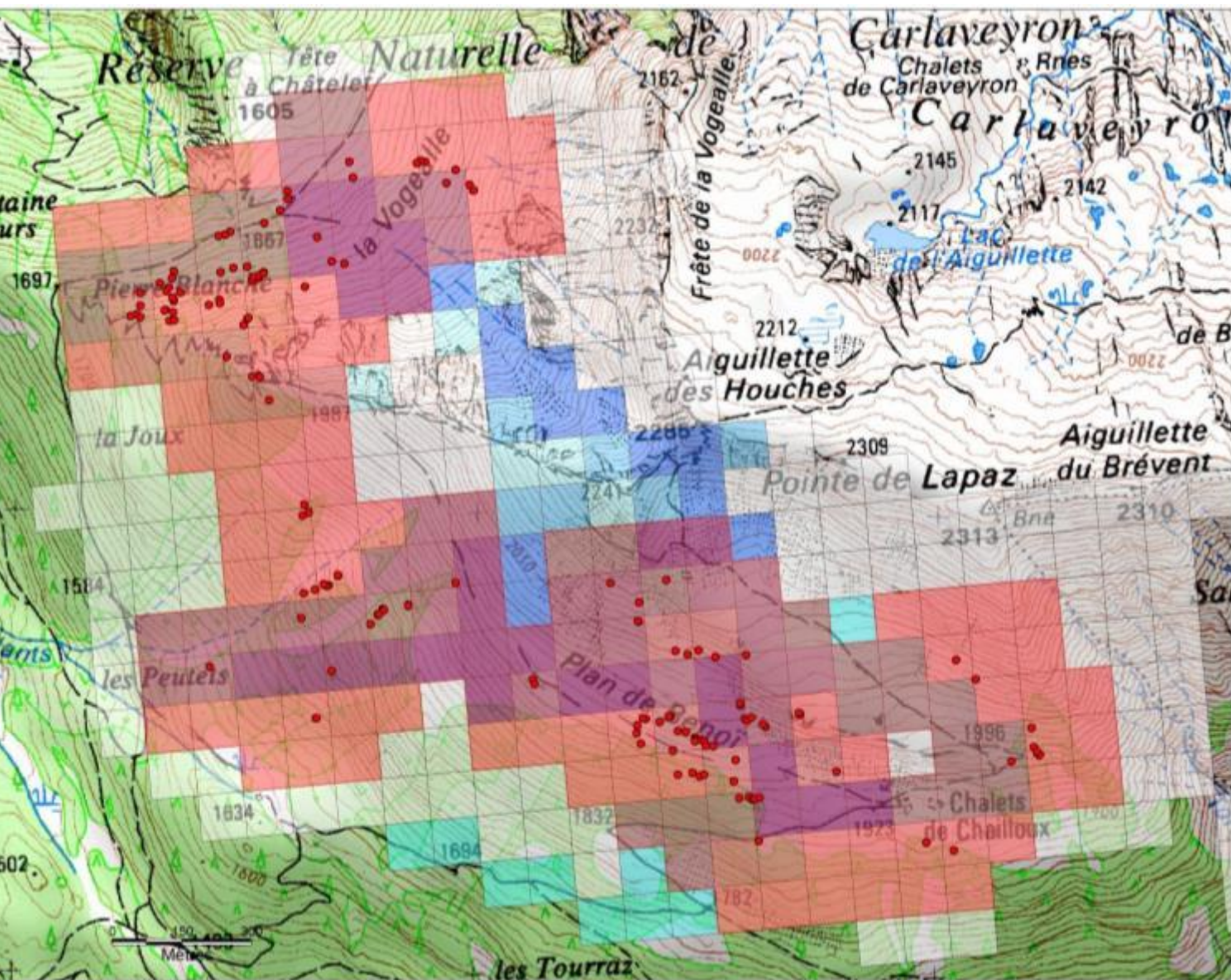
Result Step 2: location of « crottier » faeces



Faeces



Wintering
area



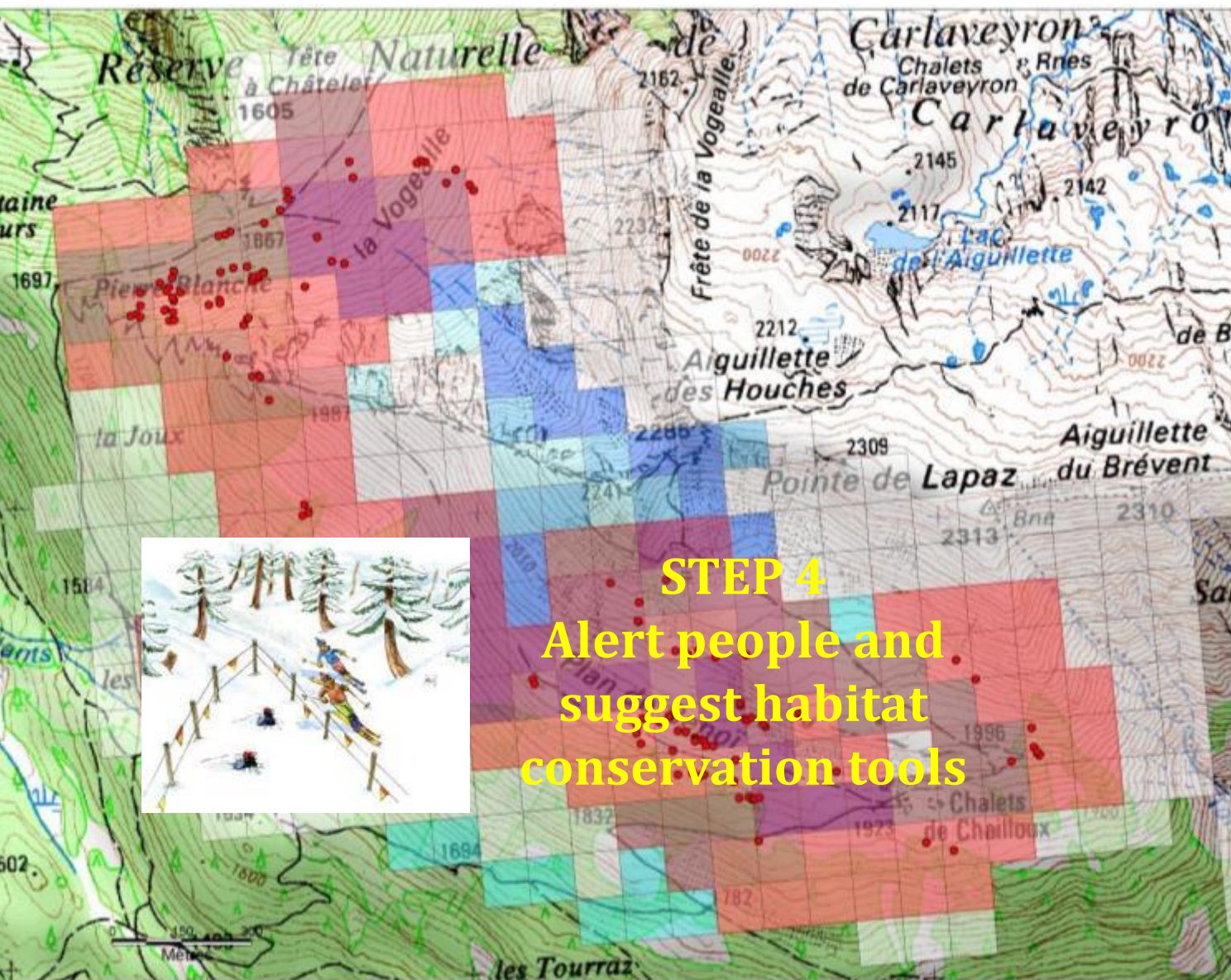
Faeces



Wintering
area

**Disturbance
intensity**

- None
- < 25 %
- Between 25 - 50 %
- Between 50 - 75 %
- > 75 %



Faeces



Wintering
area

**Disturbance
intensity**

- None
- < 25 %
- Between 25 - 50 %
- Between 50 - 75 %
- > 75 %

Thanks for listening

