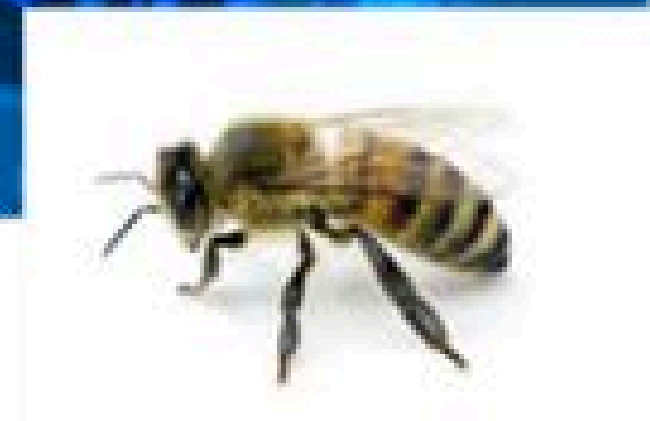
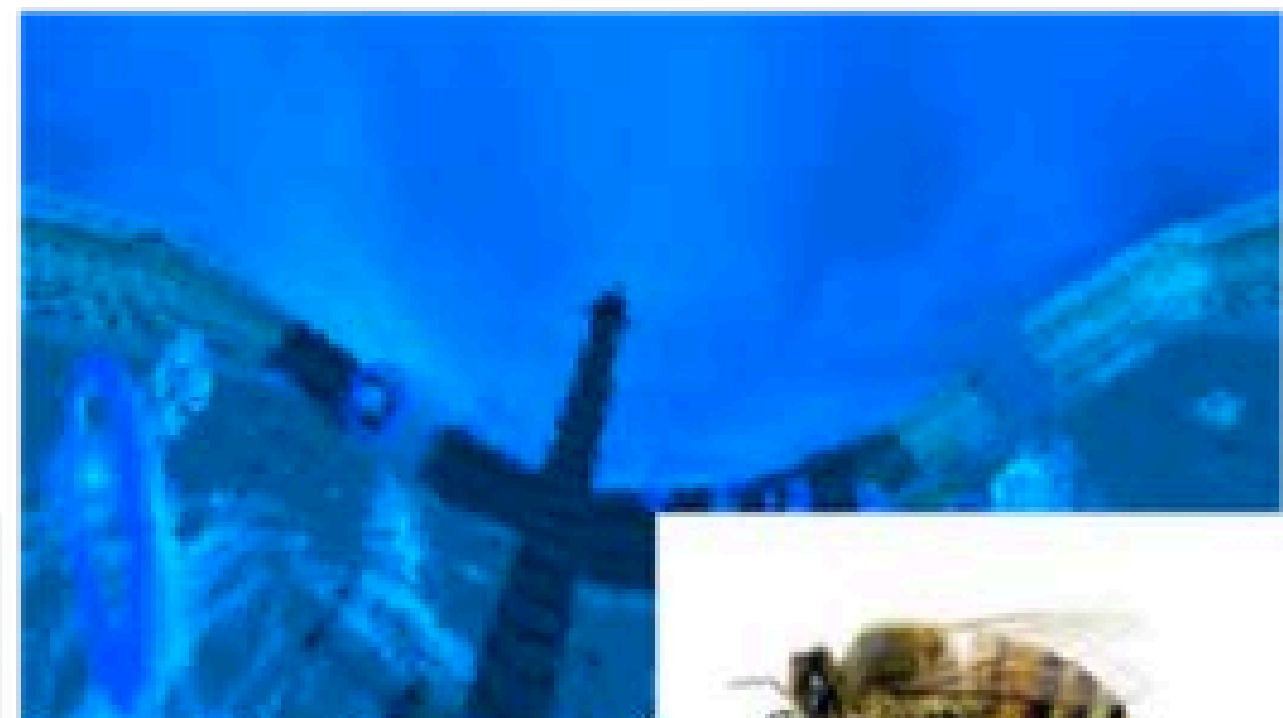
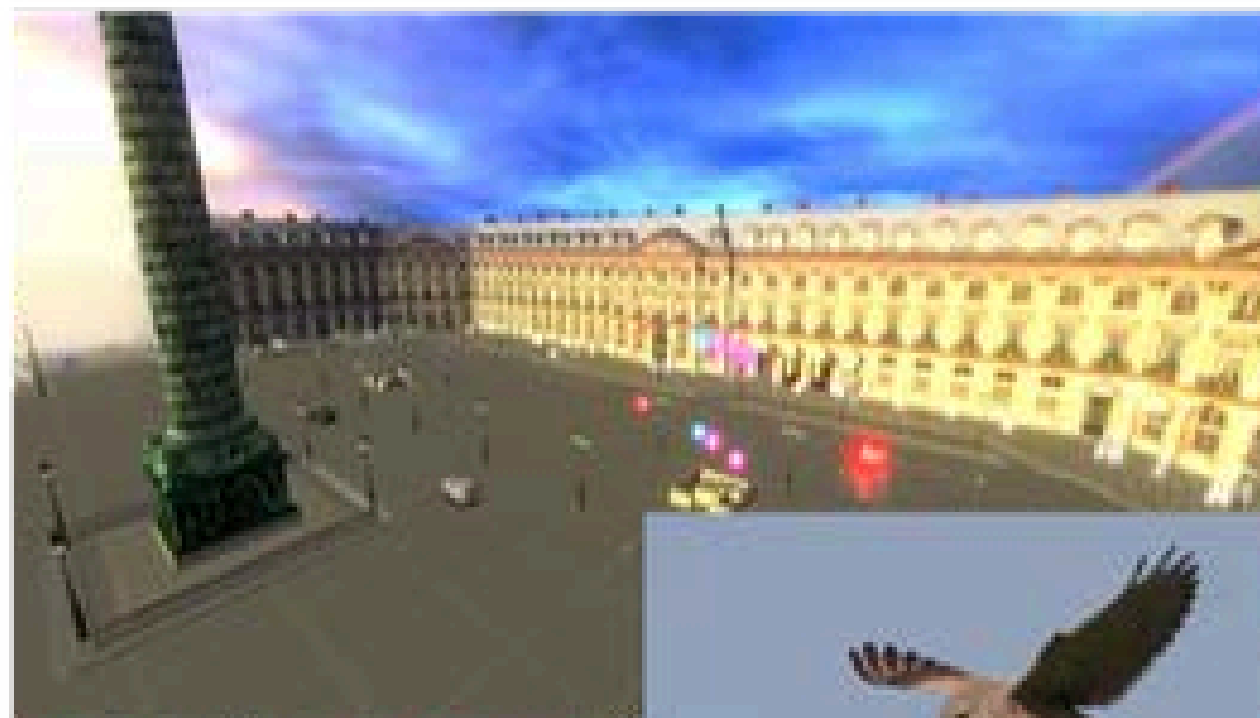
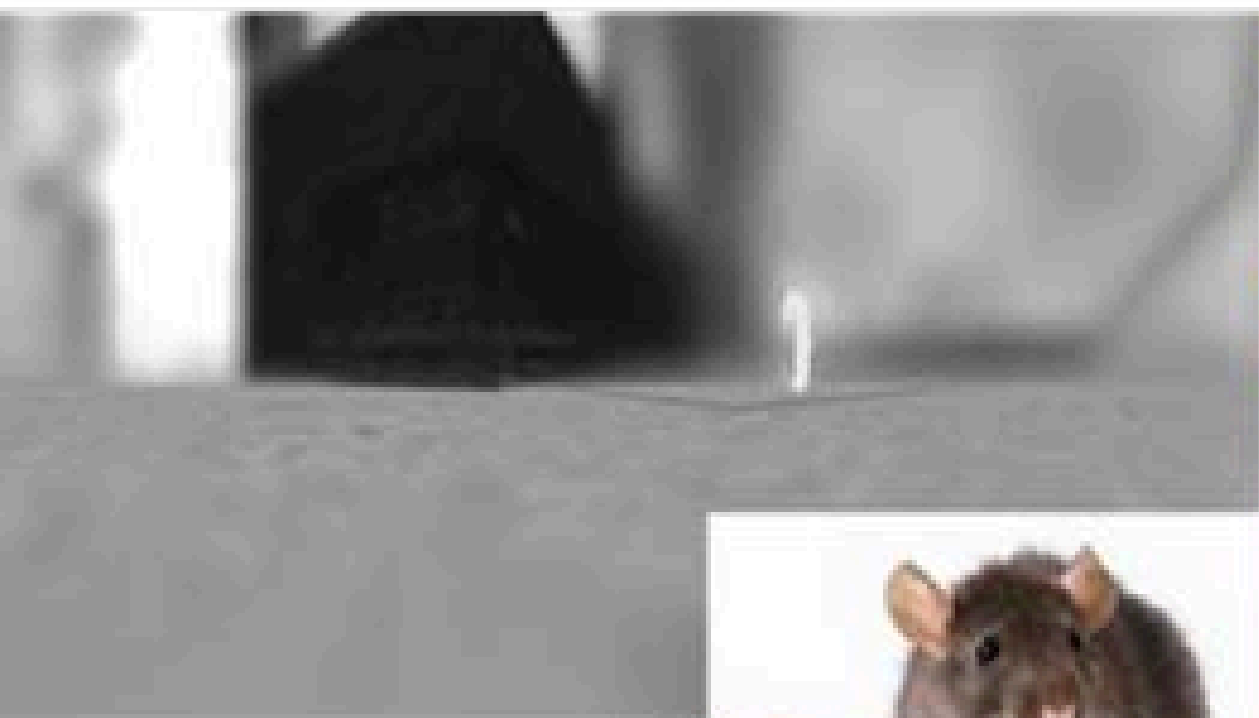
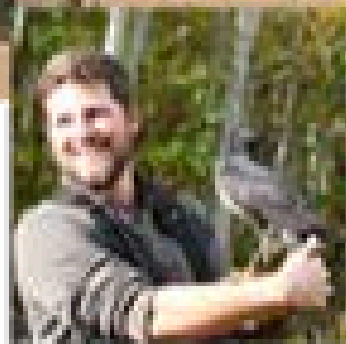
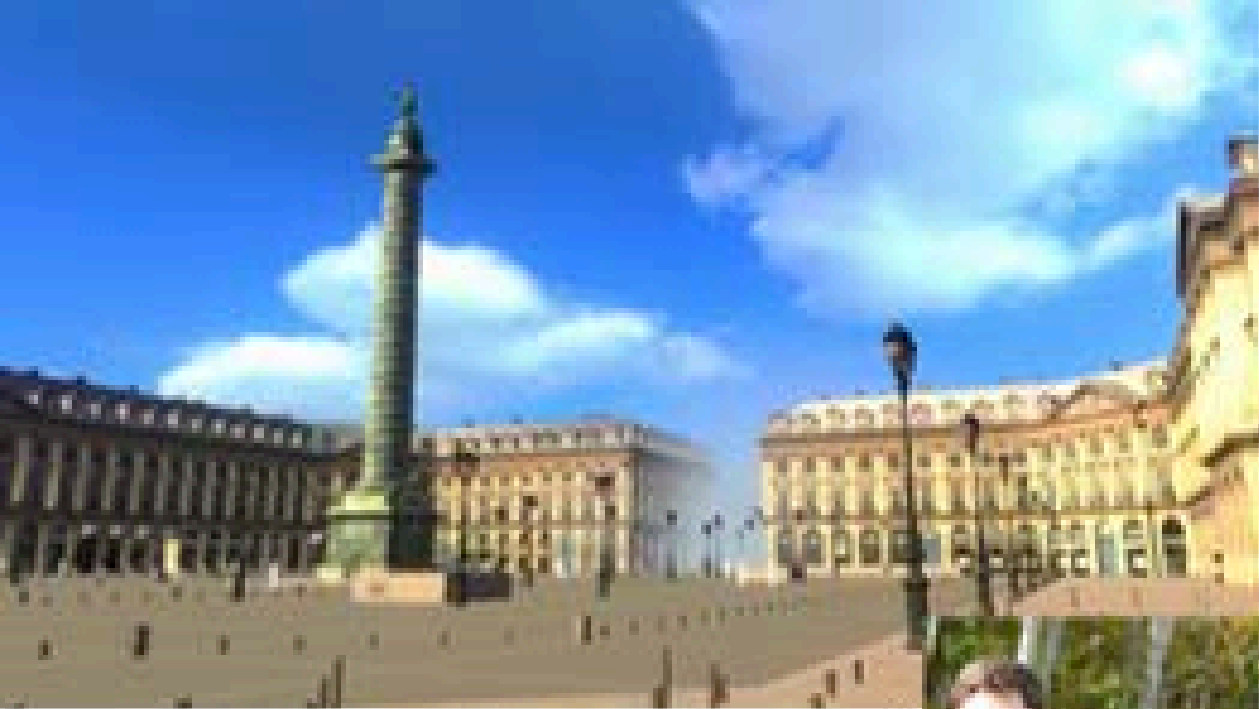
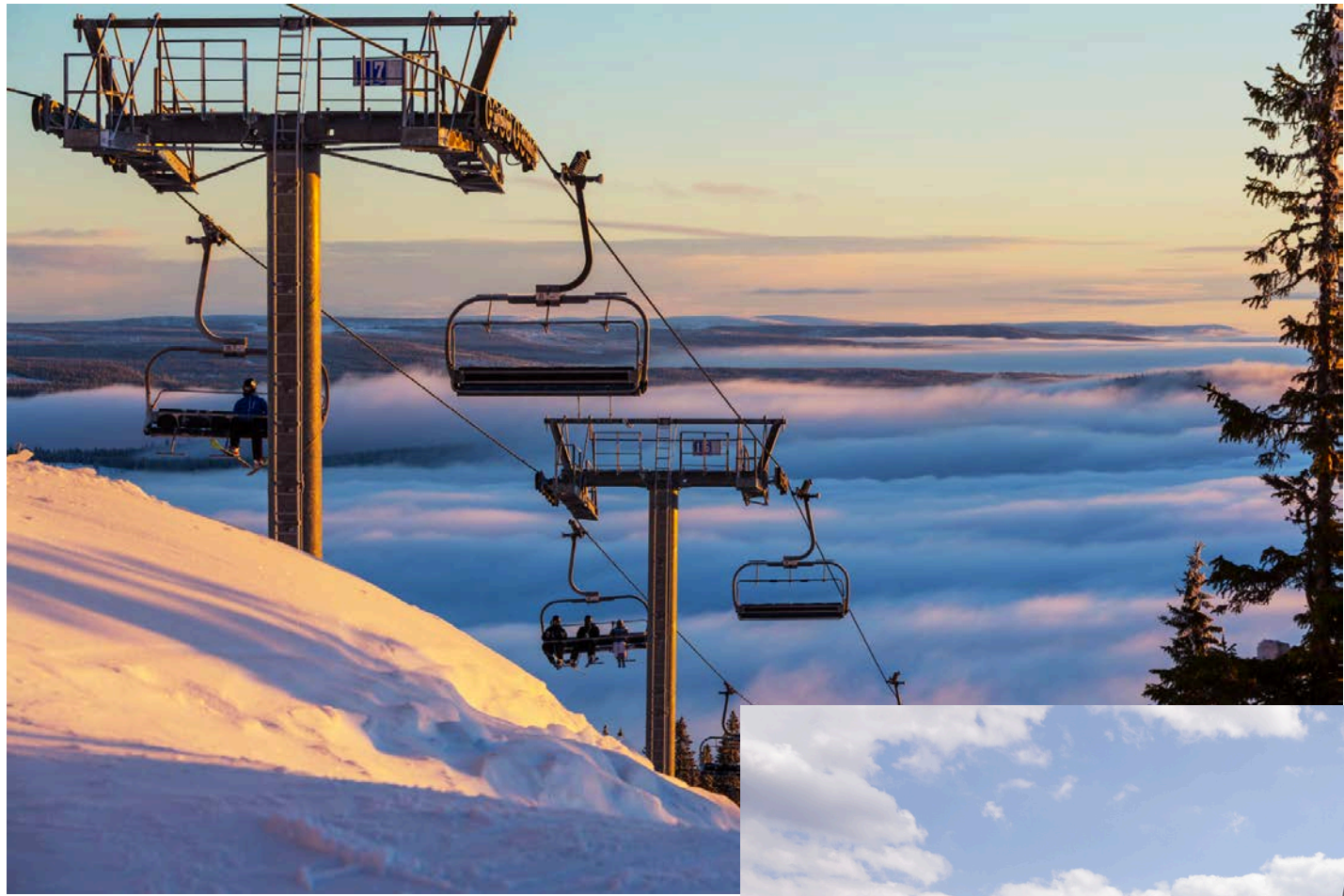


Capacités visuelles et collisions

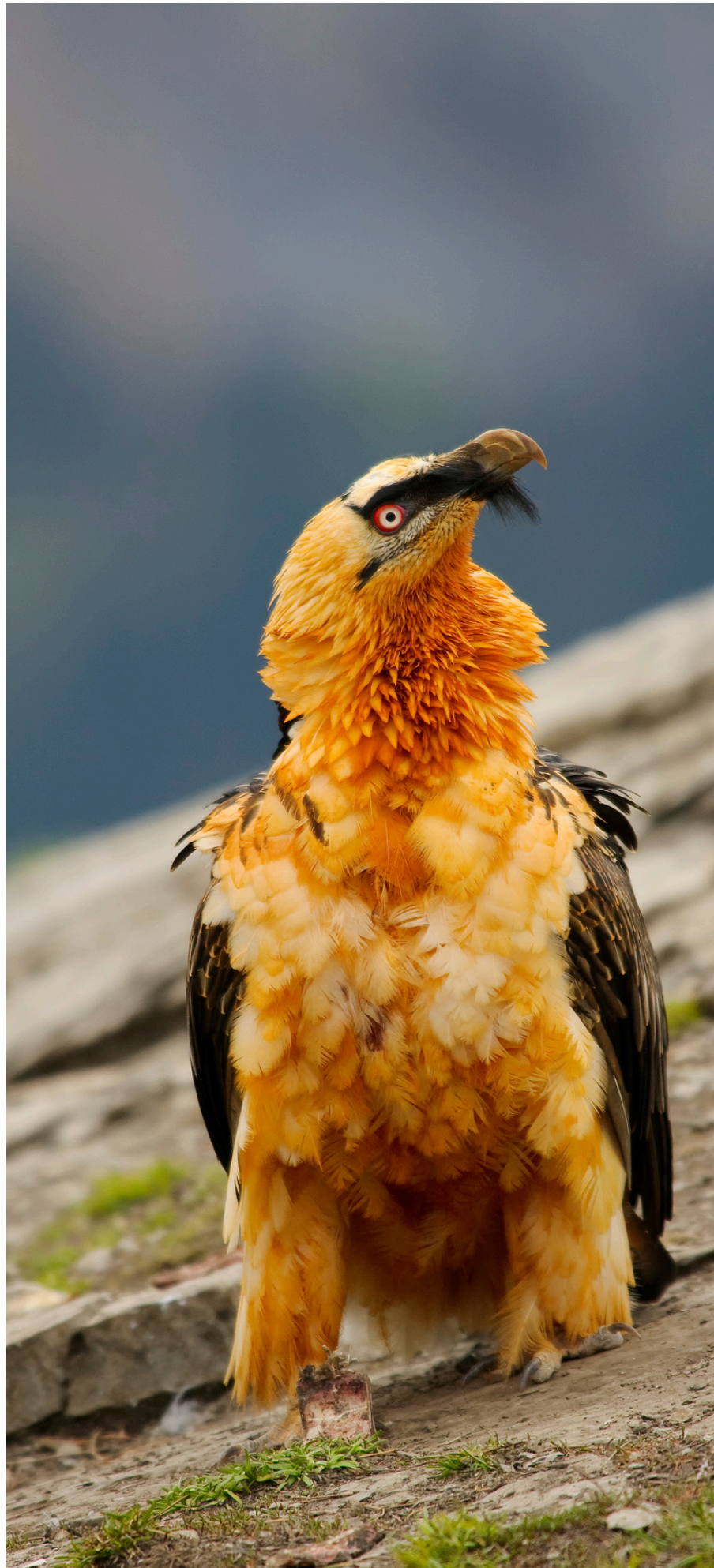
Le cas des vautours





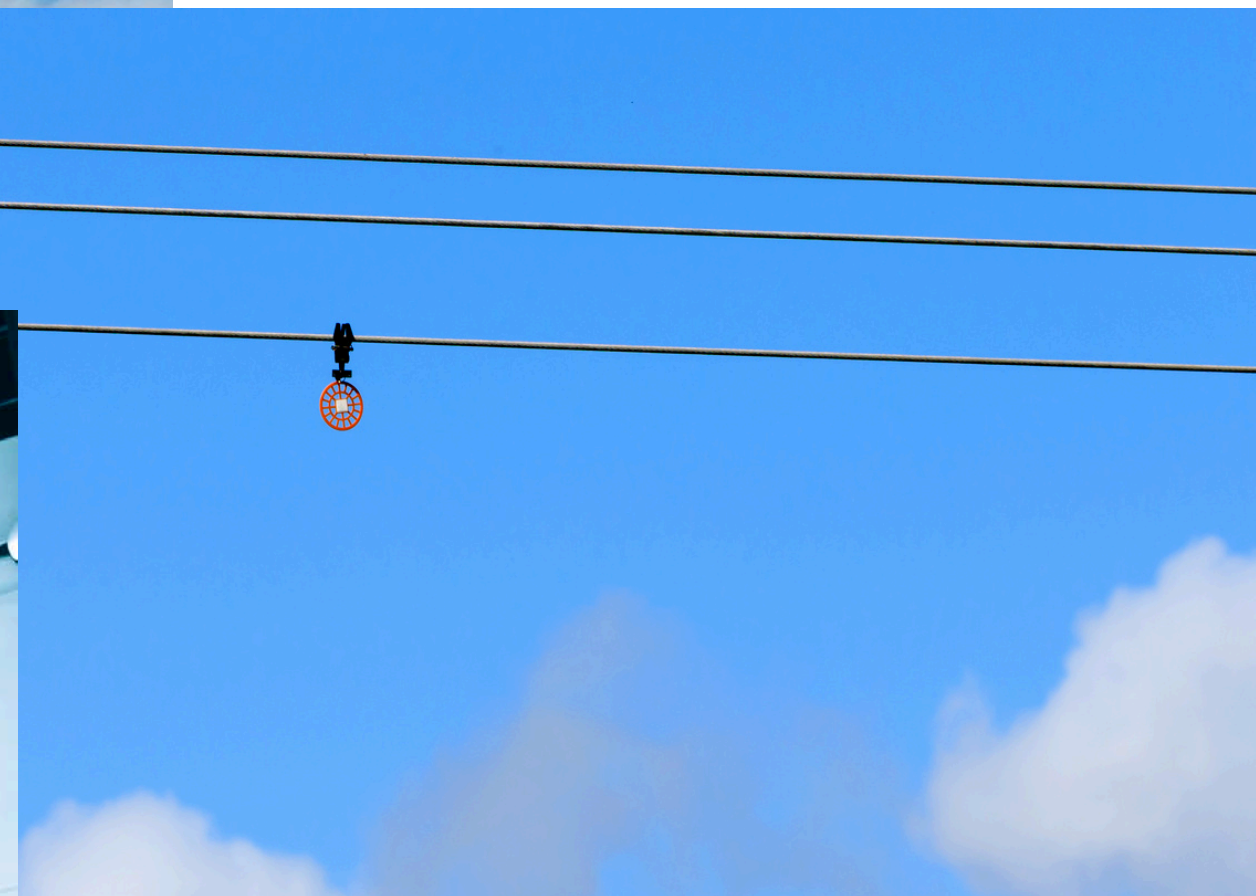
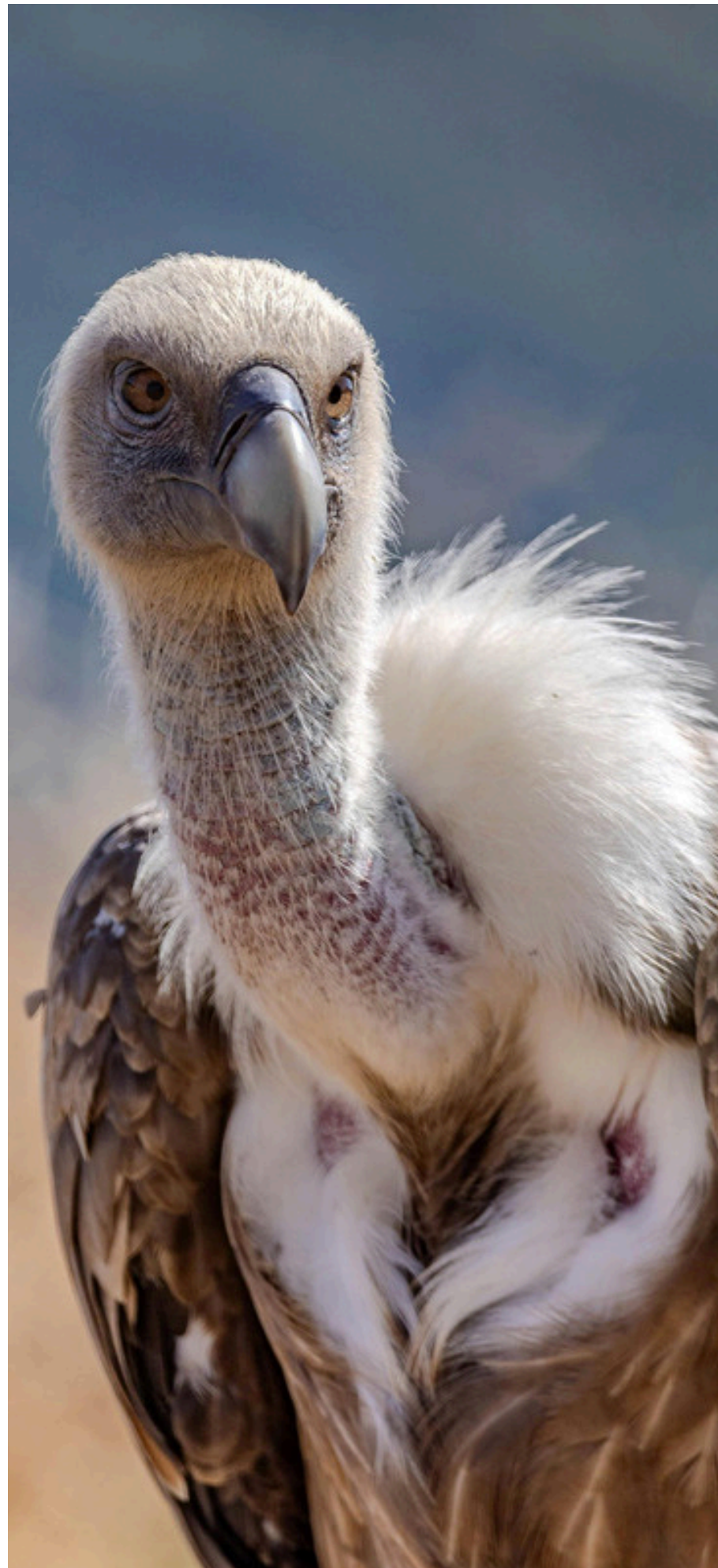


Importance des percussions



6-8 individus par an → la population est en déclin dans les Alpes

Ecologie sensorielle



Vision : sens multifacettes



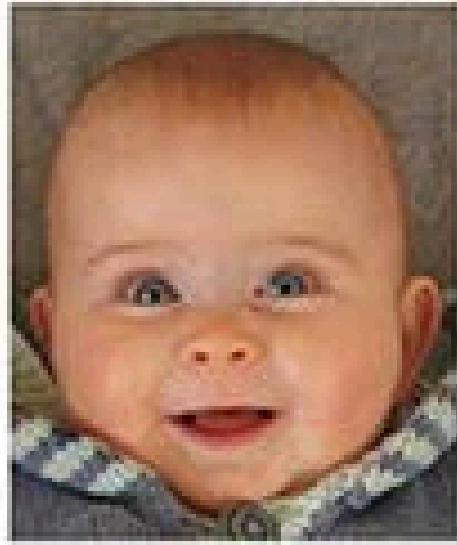
Est-ce que l'objet
entre dans le
champ de vision ?

A-t-il un taille
suffisante ?

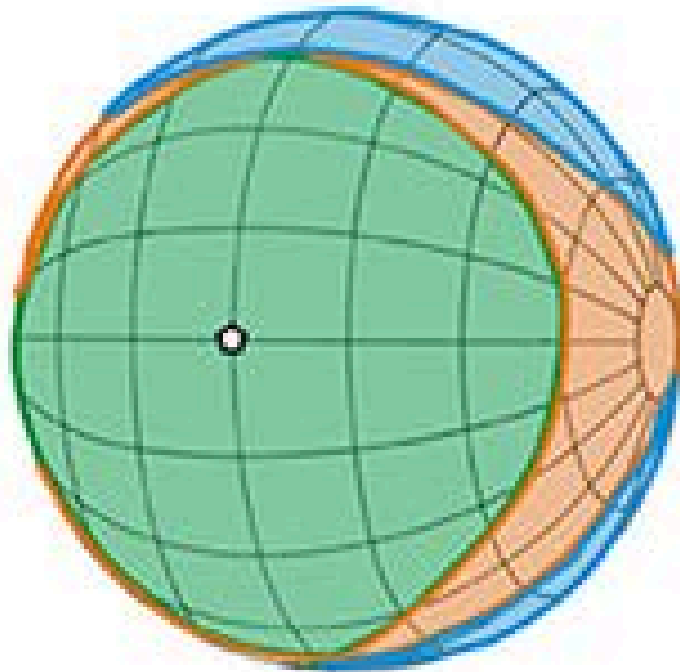
A-t-il un contraste
achromatique
suffisante ?

Est-il en
mouvement ?

Les couleurs
sont-elles
perceptibles ?



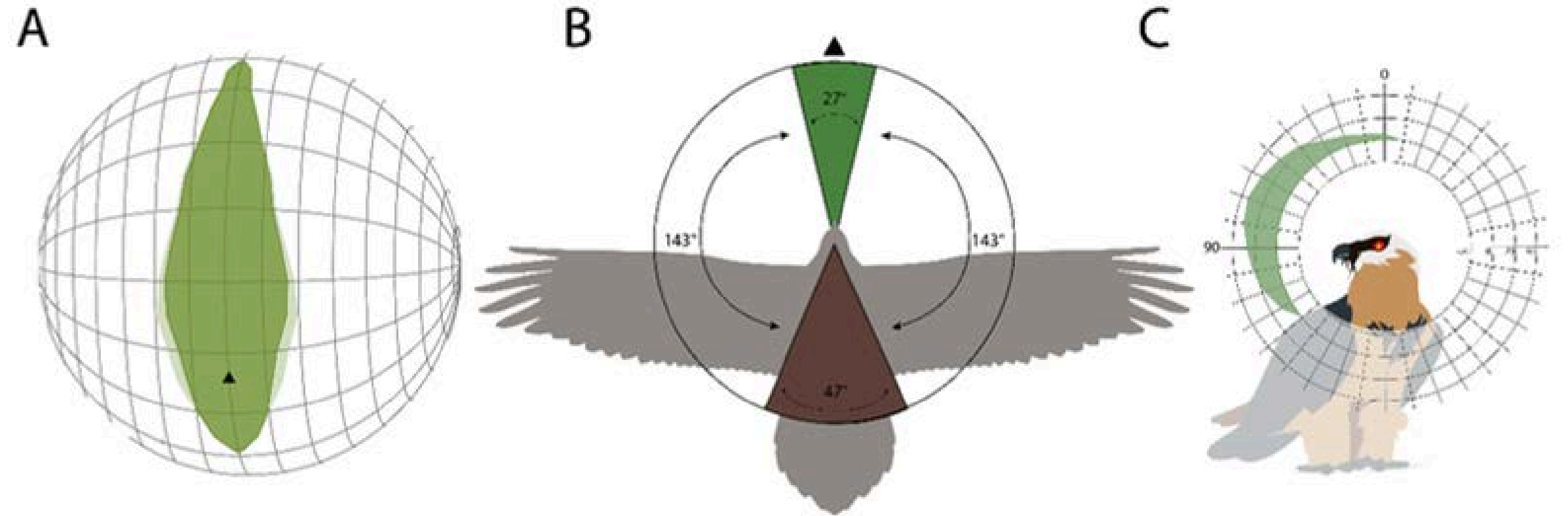
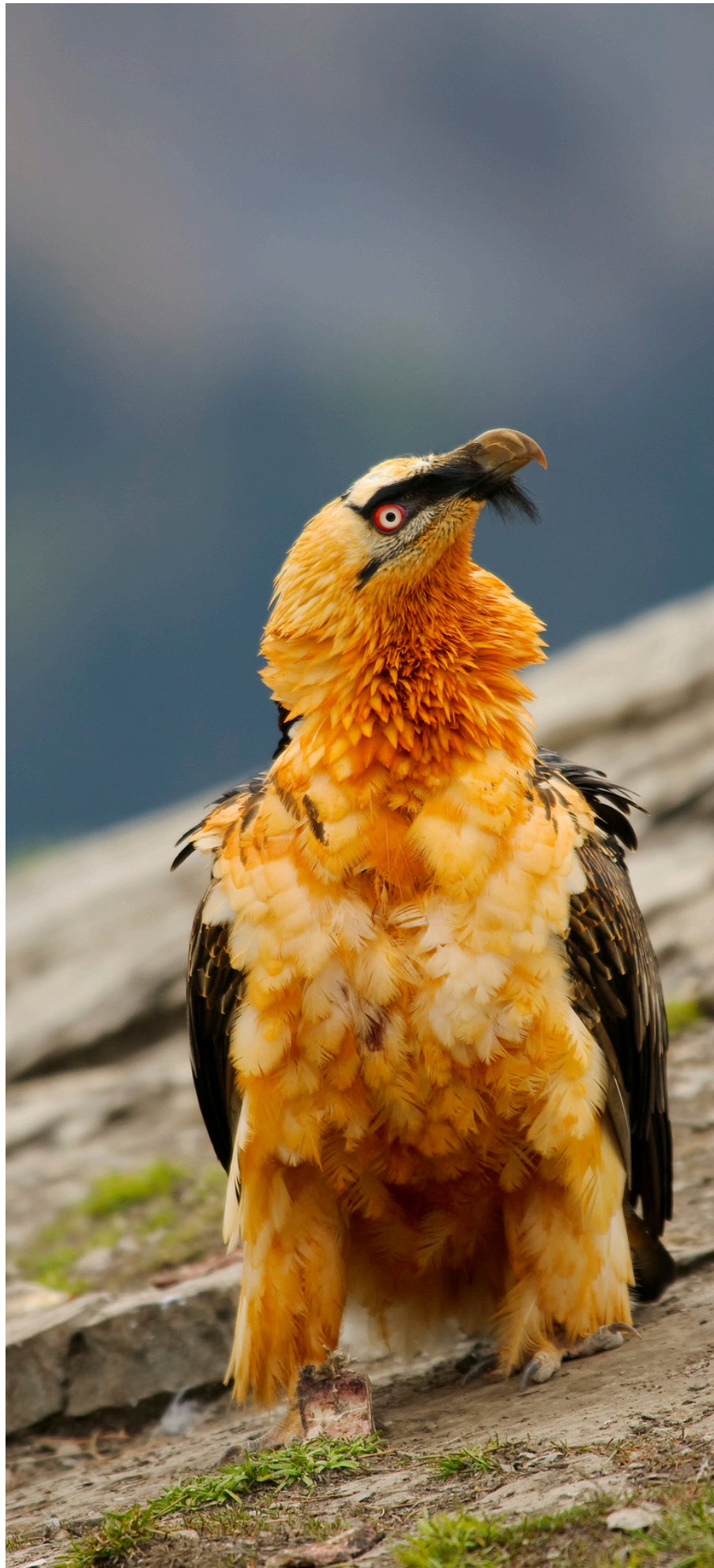
Human



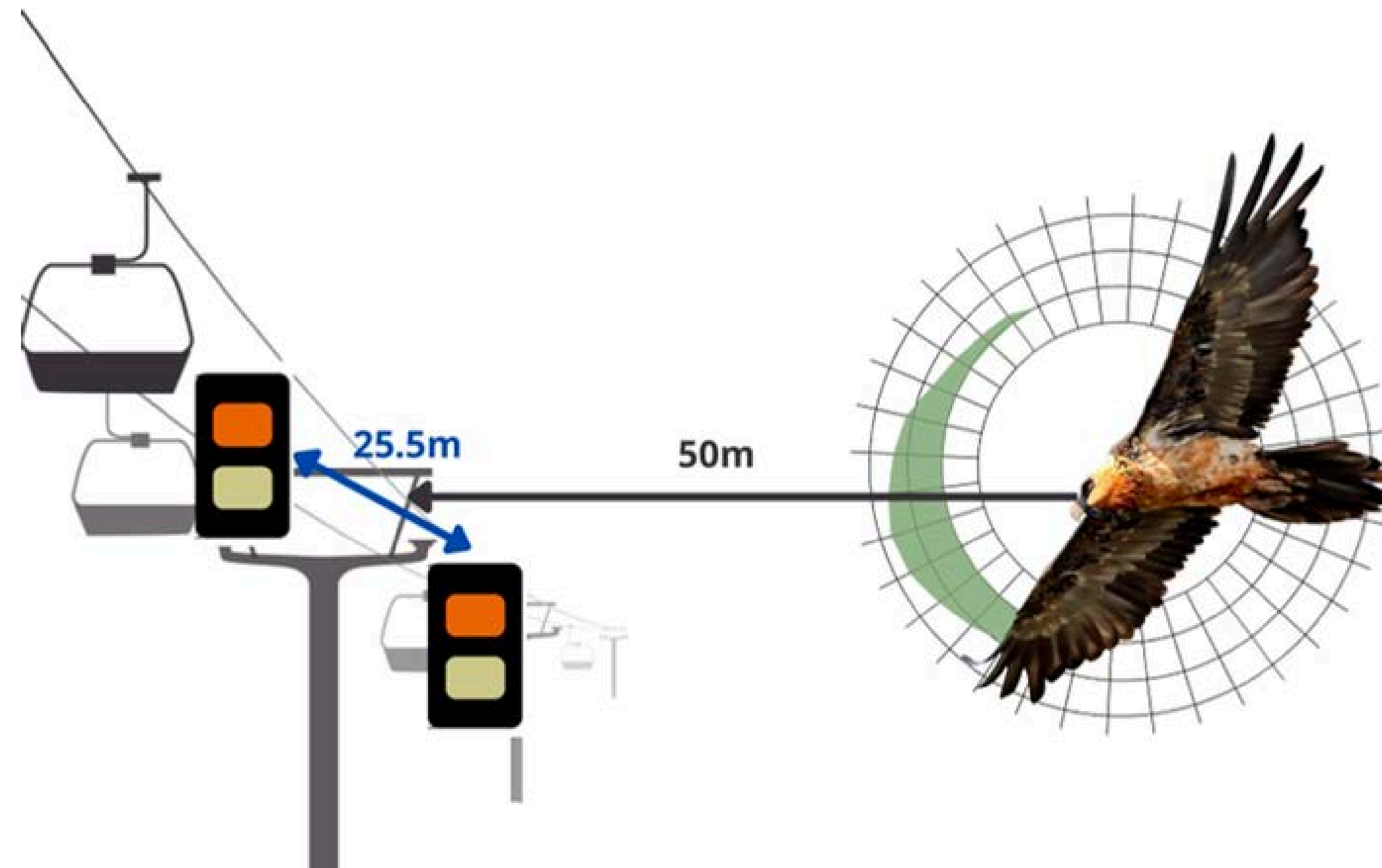
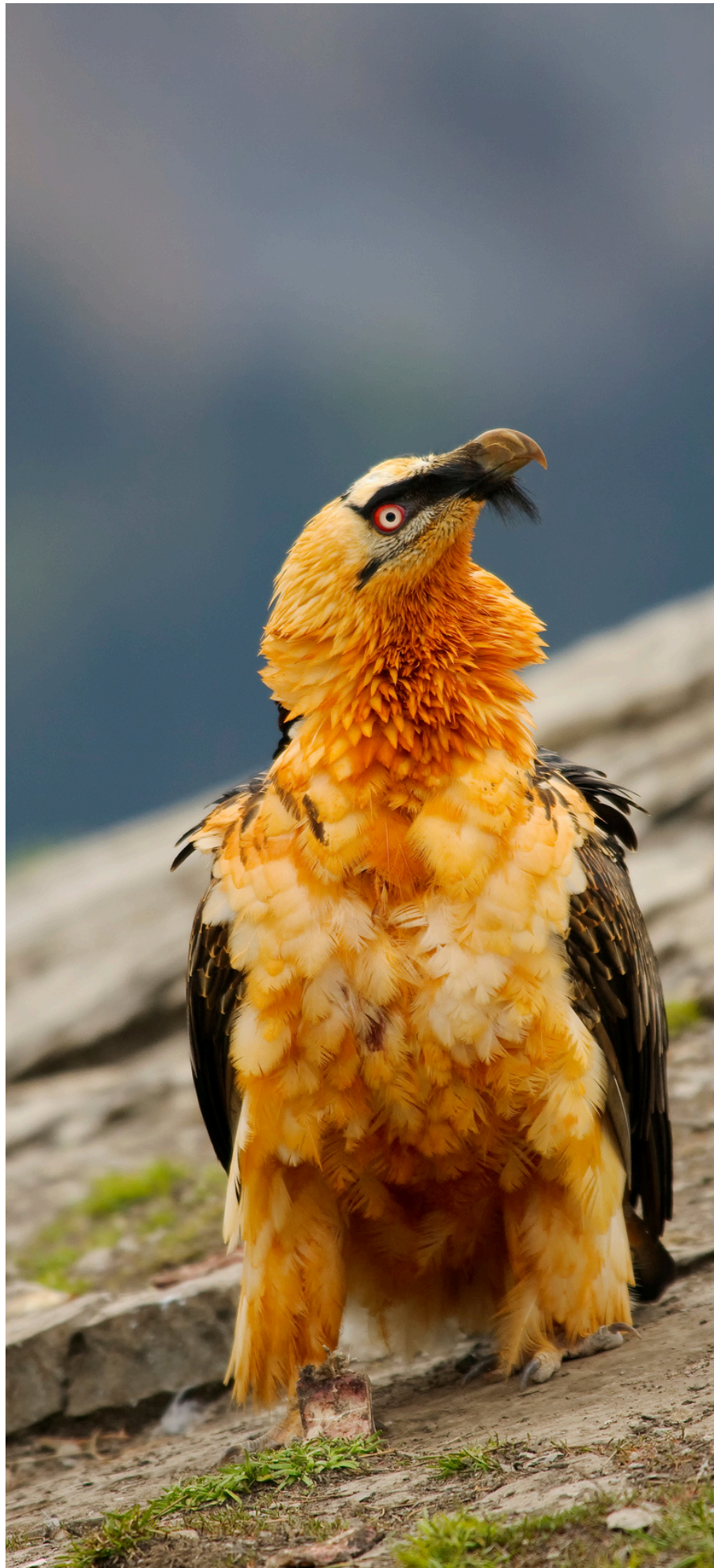
L'objet entre-t-il dans le champ de vision ?

Le champ de vision correspond à l'espace autour de la tête dans lequel les informations visuelles peuvent être collectées.

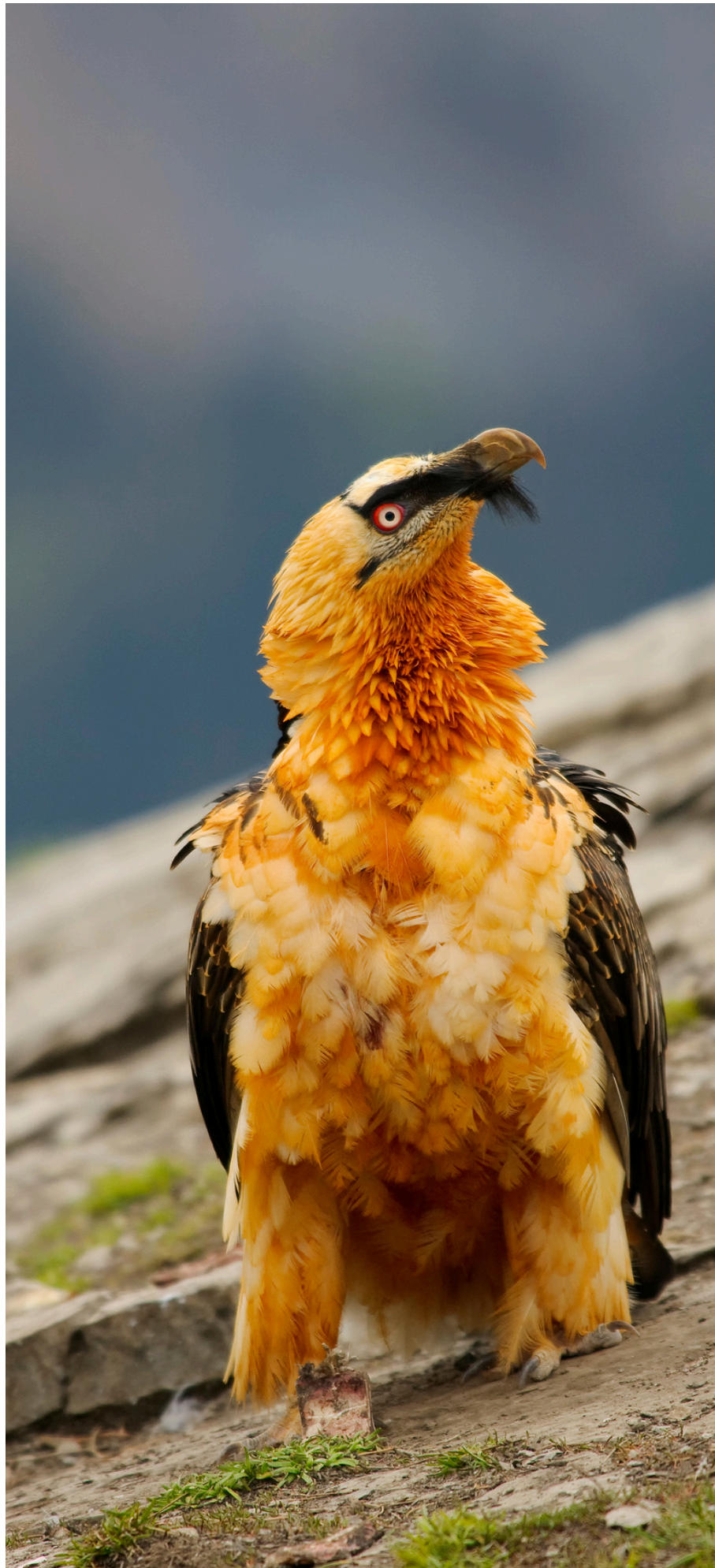
Champ de vision



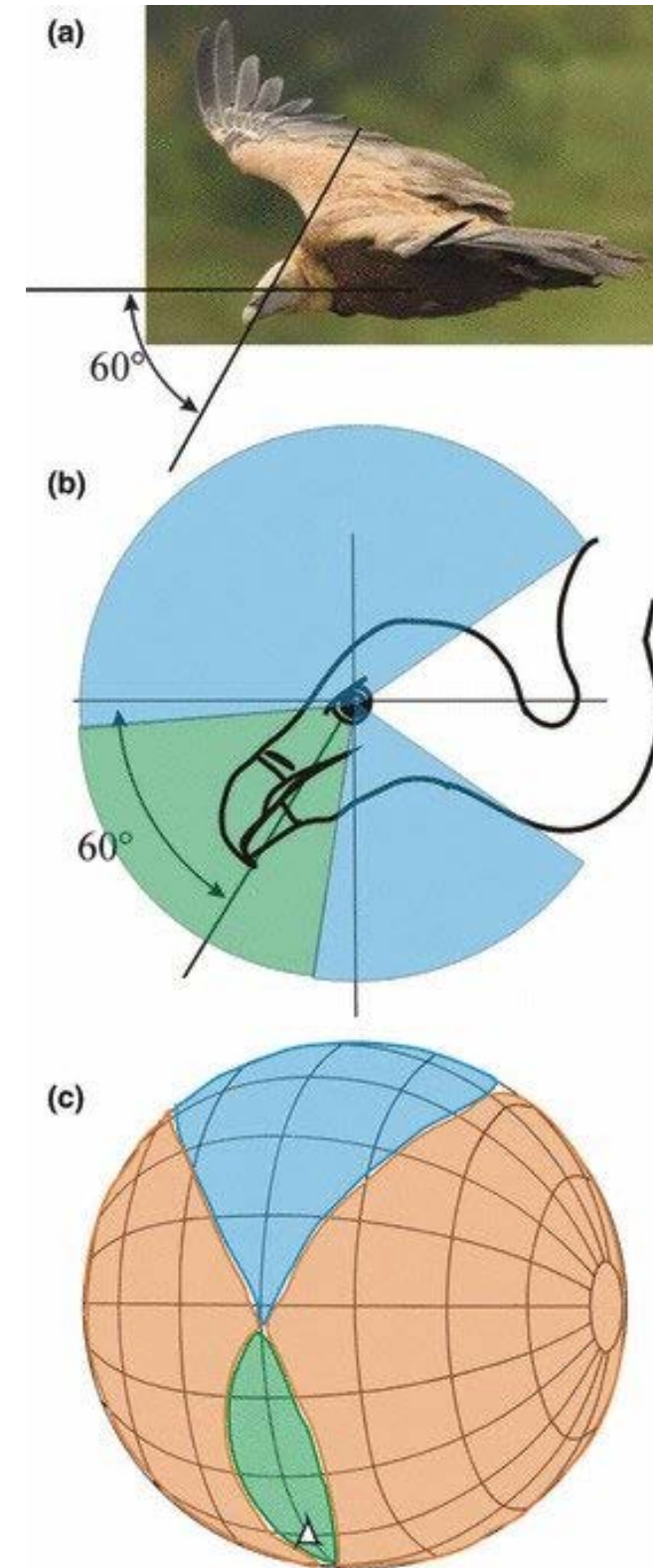
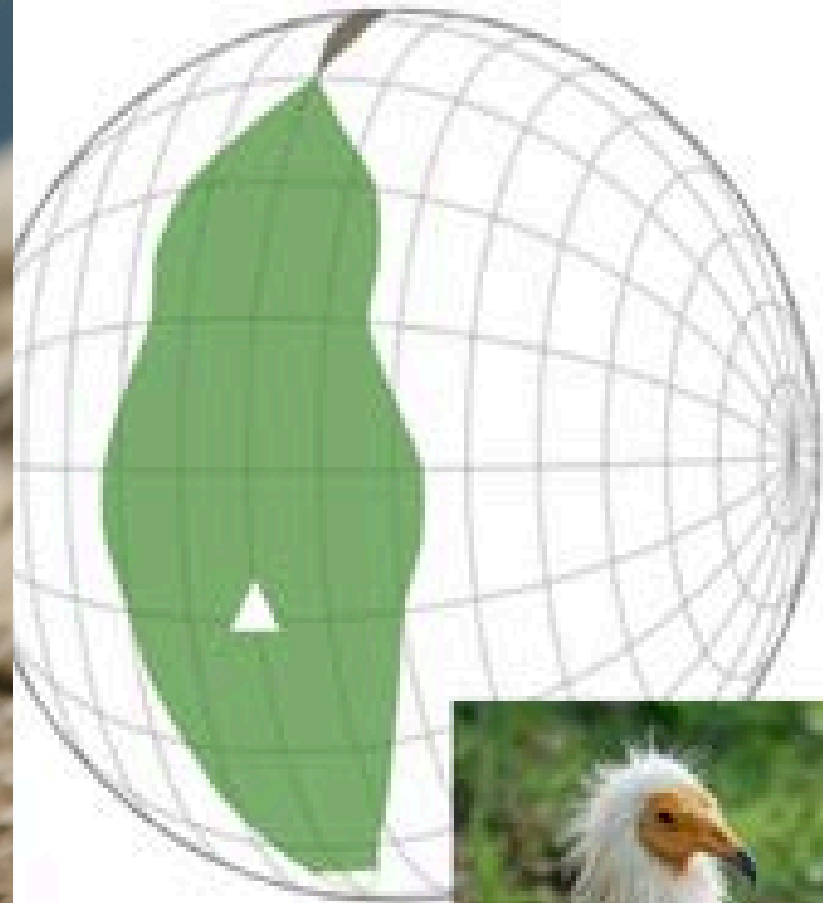
Champ de vision



Champ de vision



Percnoptère d'Egypte





**L'objet est-il de taille
suffisante ?**

Acuité visuelle



cycle par degrés

1

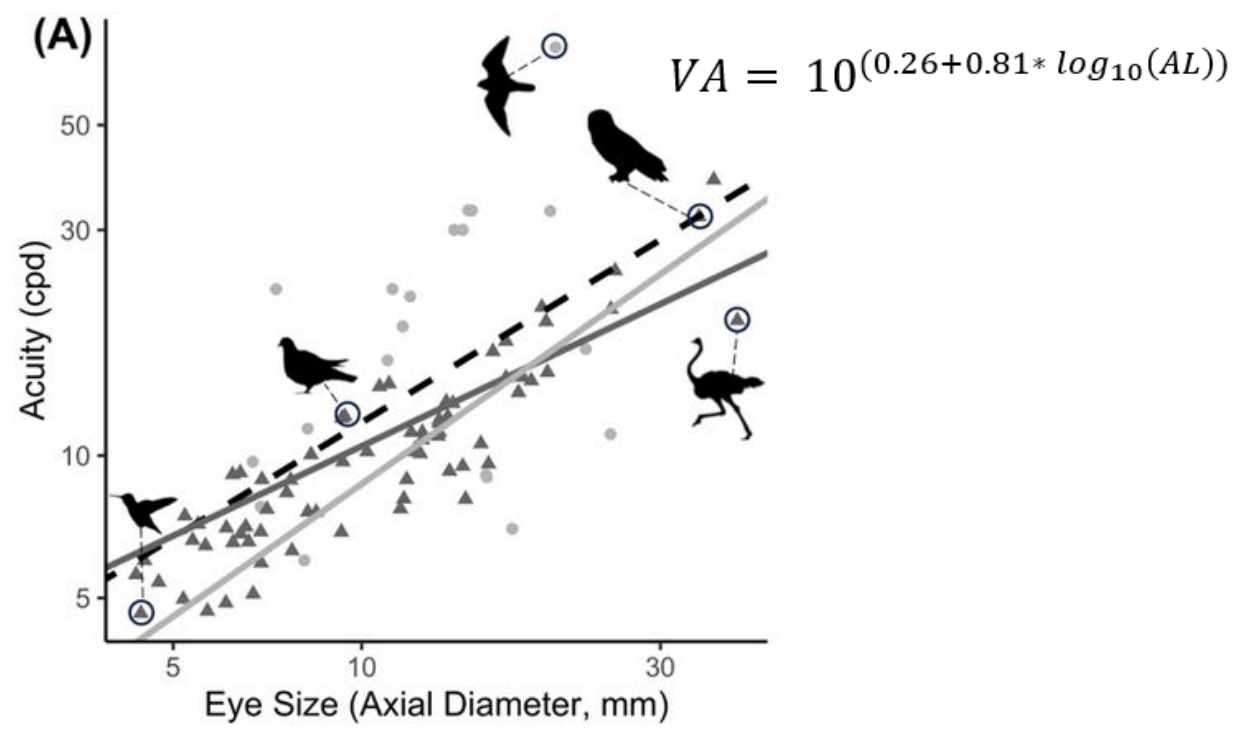
10

45 - 50 (70)

100



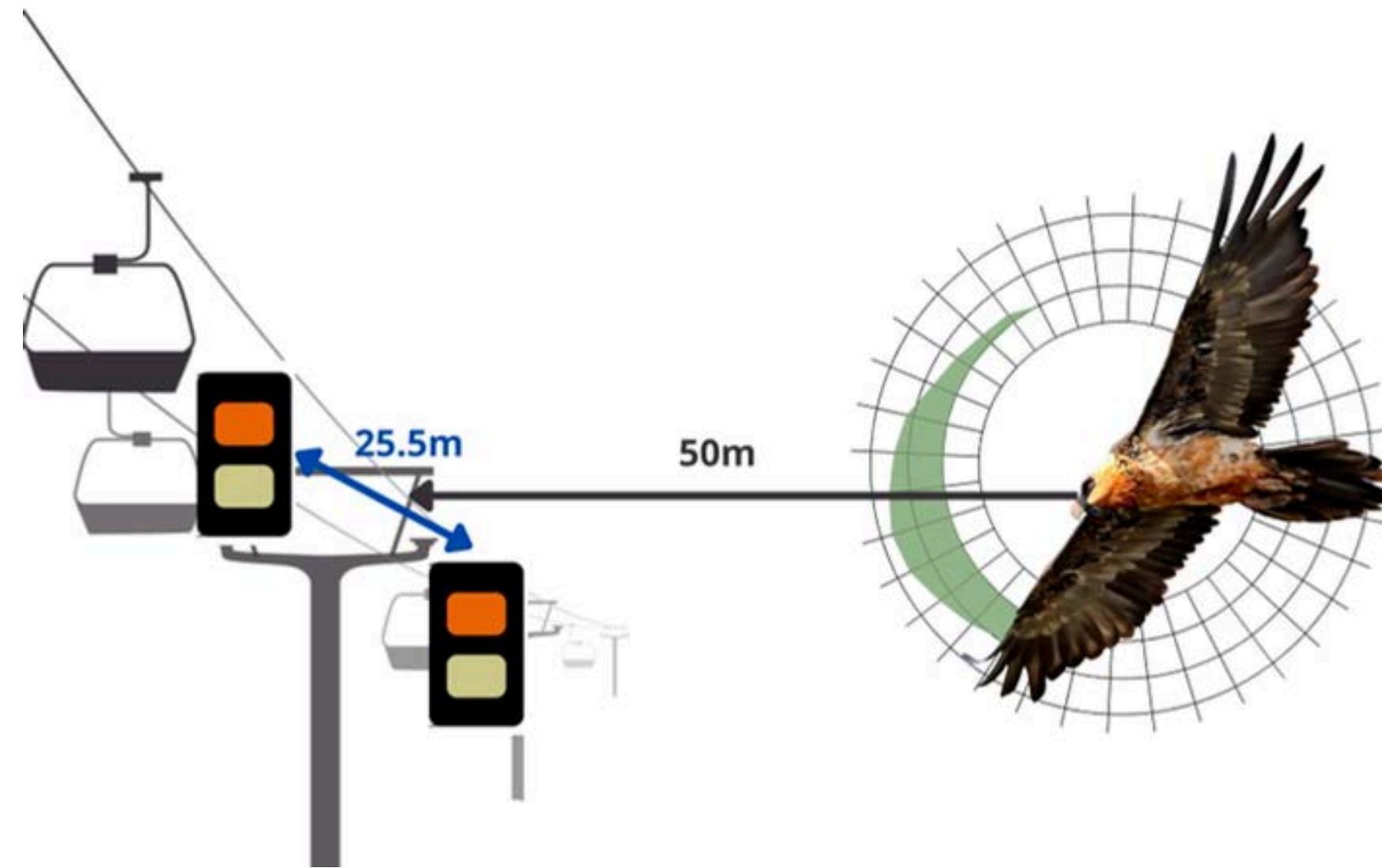
109



Fischer 1968 ; Reymond 1985 ; Harming et al. 2009 ; Lisney et al. 2013 ; Potier et al. 2016 ; Potier et al. in prep

Acuité visuelle

Vitesse de vol = 25 m/s
Temps de réaction = 2 s



Conditions optimales

Taille minimale de la balise

Conditions variables

0.4*0.4 cm

2*2 cm

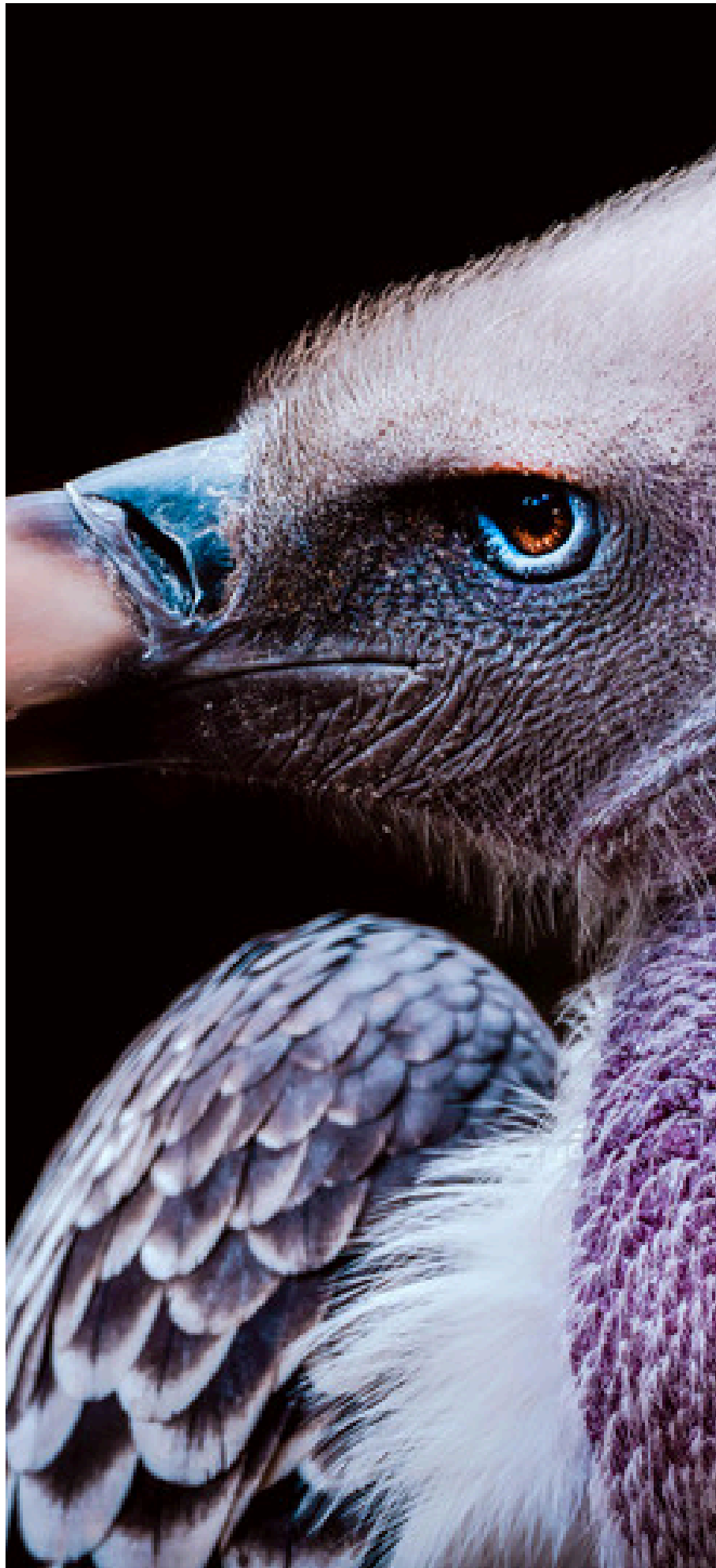
2*2 cm



**L'objet est-il
suffisamment
contrasté ?**



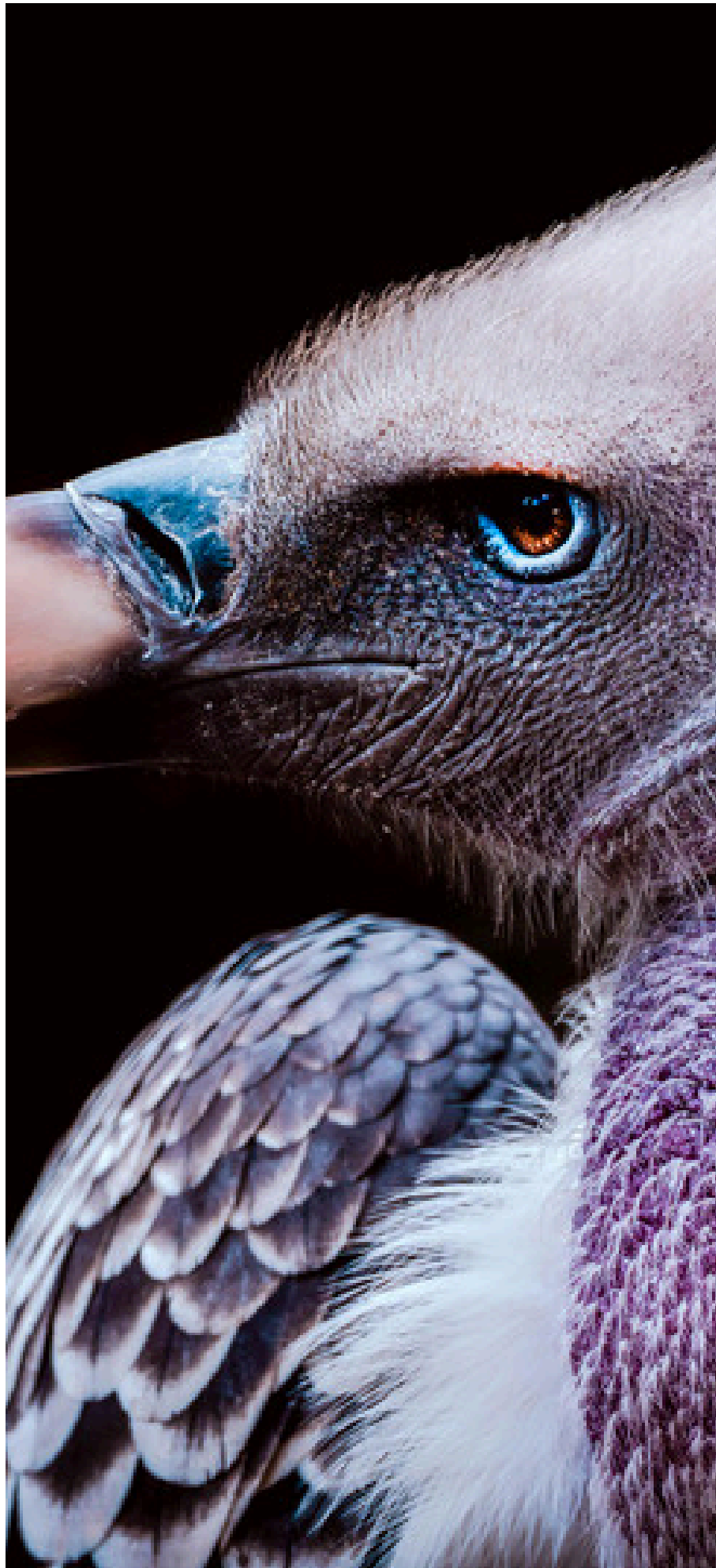
Sensibilité aux contrastes



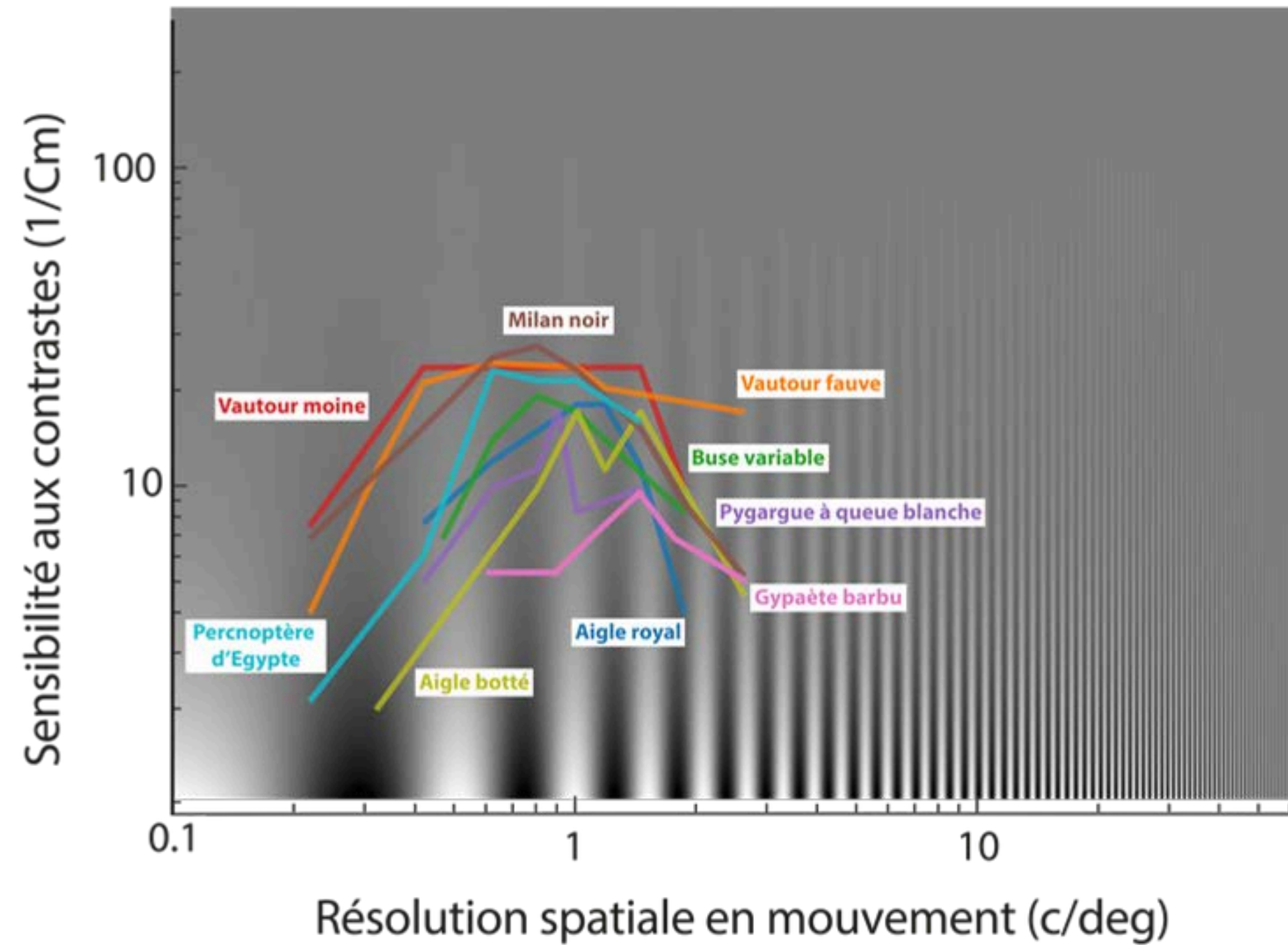
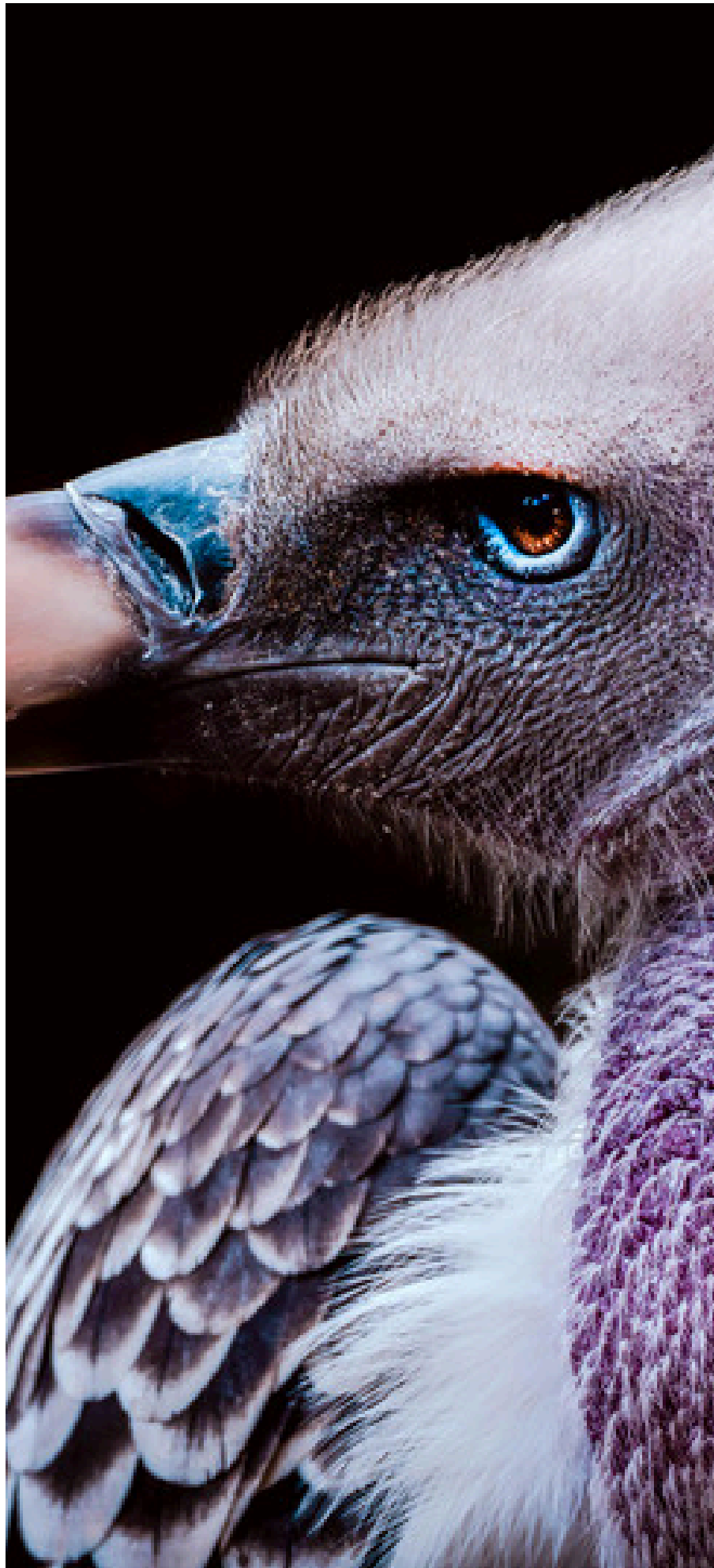
Sensibilité aux contrastes



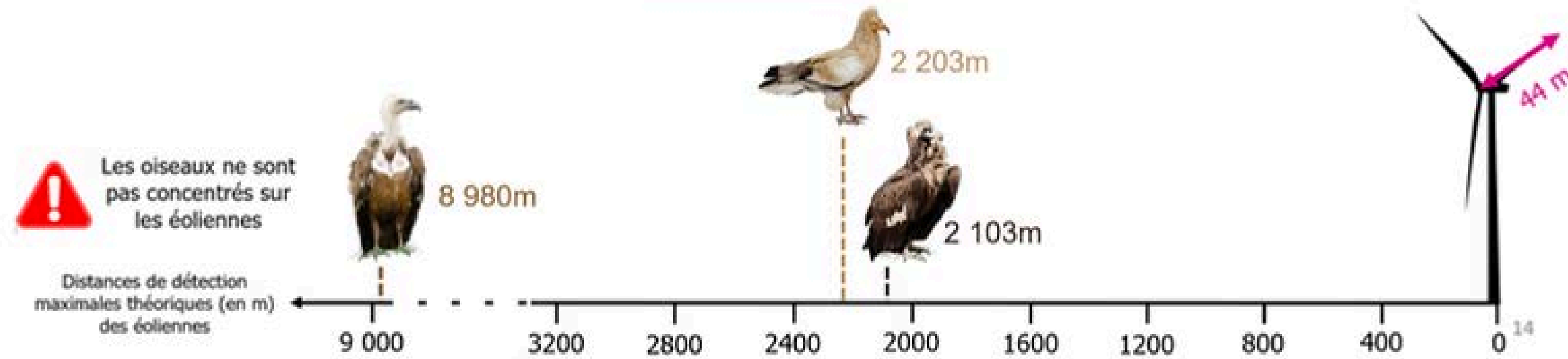
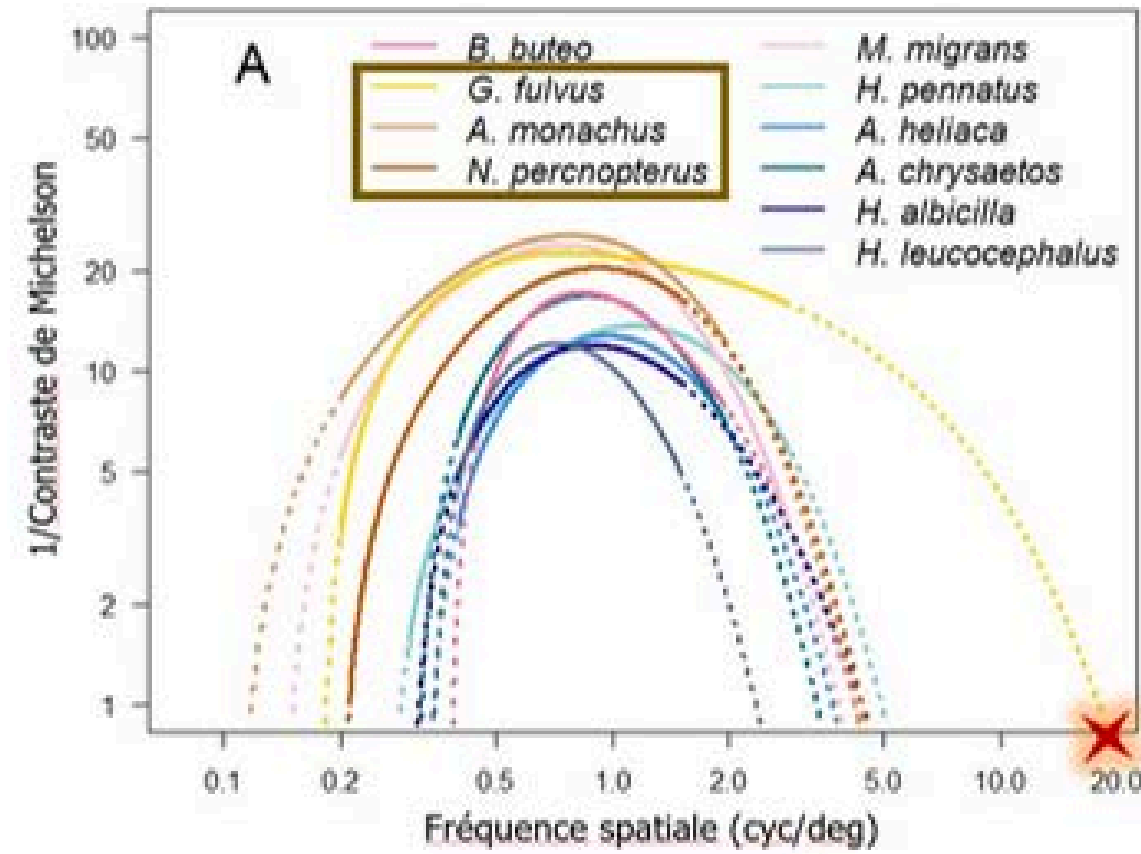
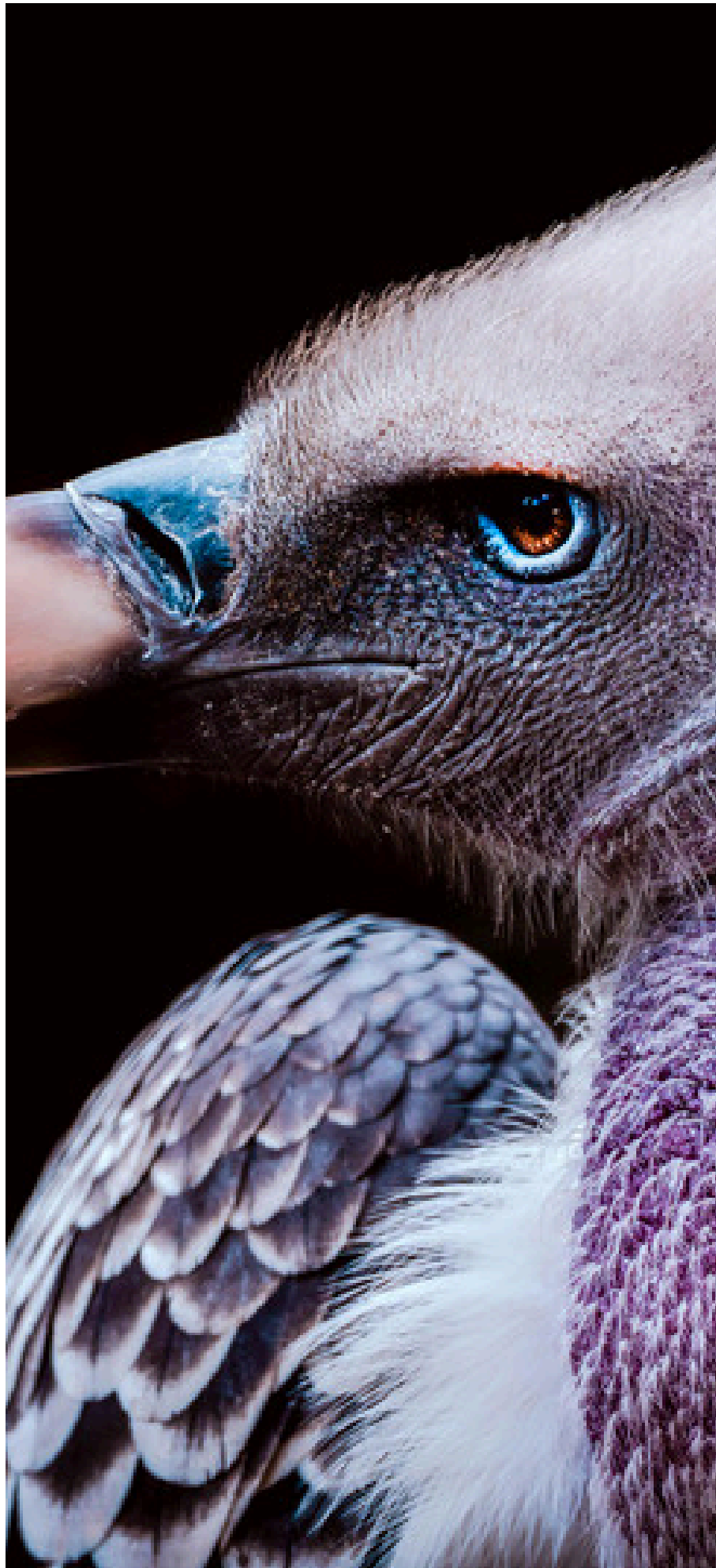
Sensibilité aux contrastes



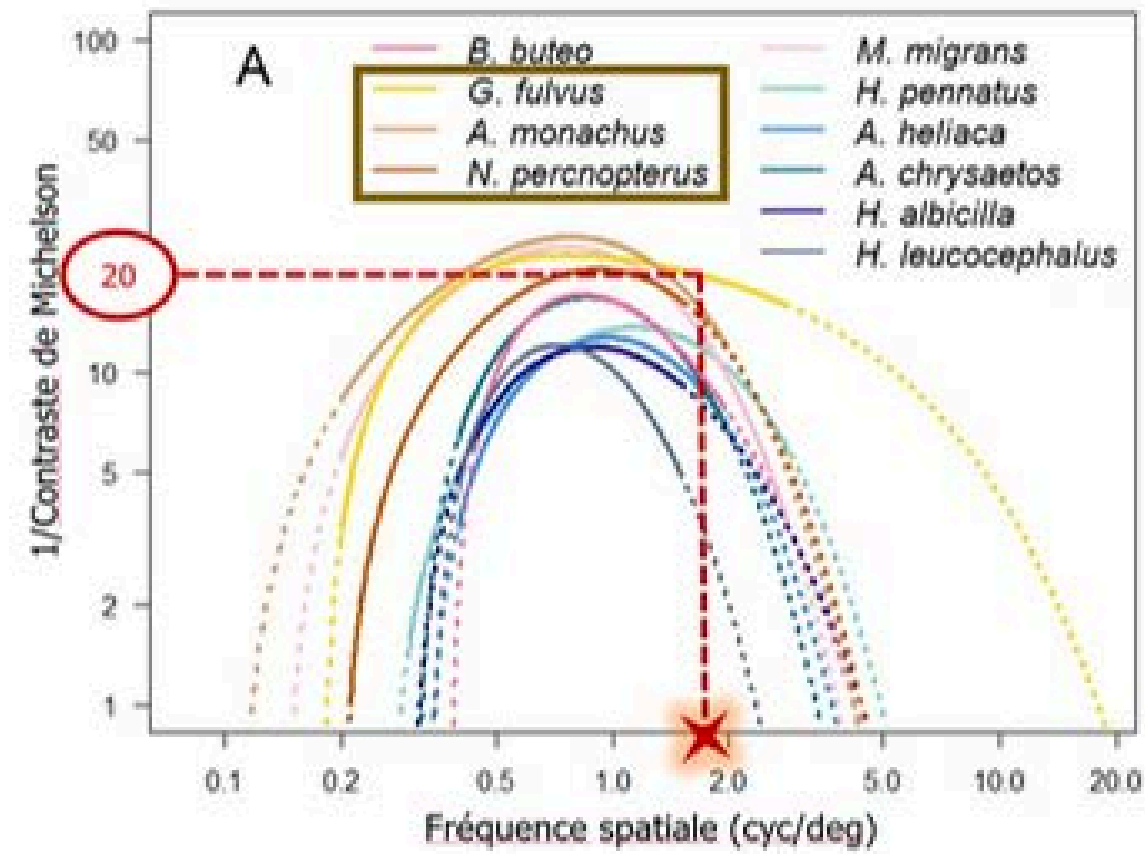
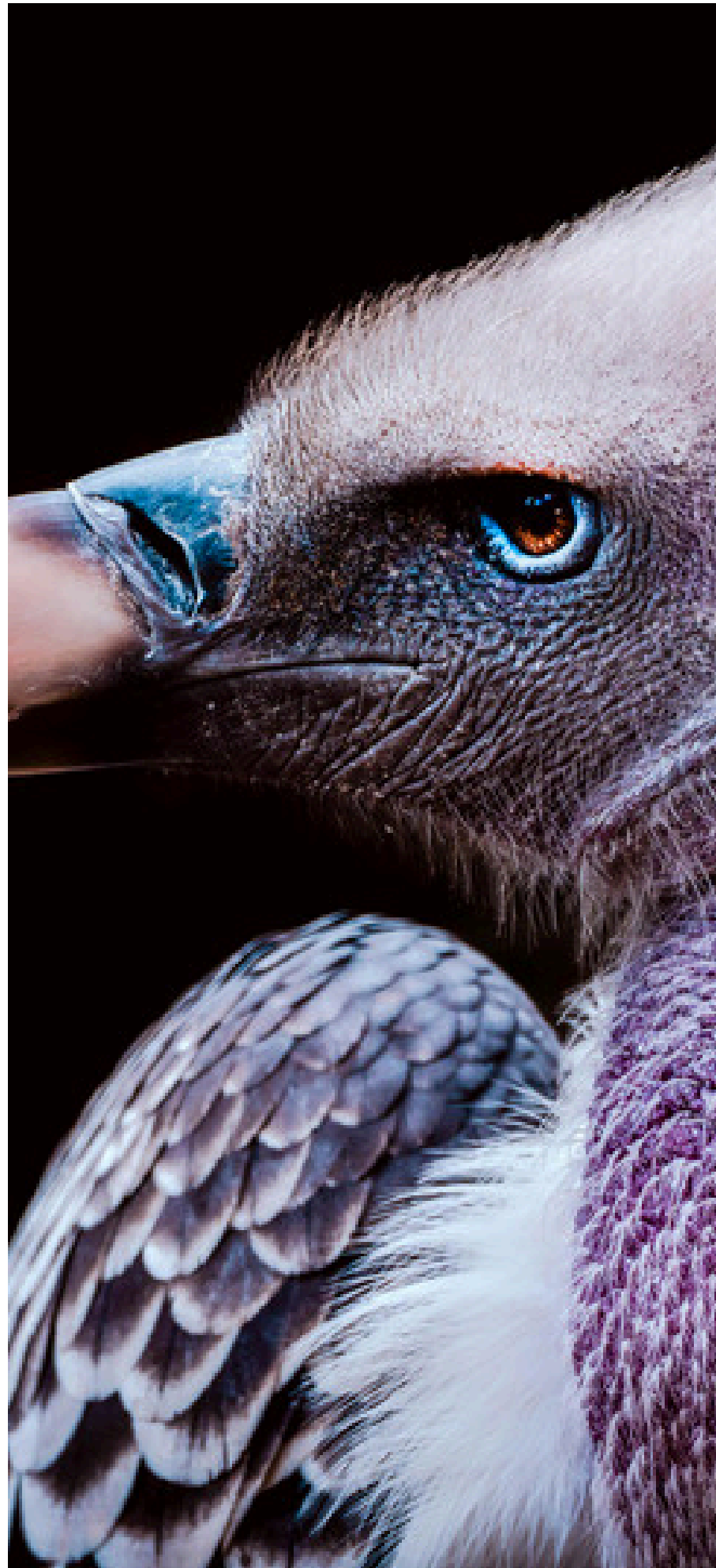
Sensibilité aux contrastes



Sensibilité aux contrastes

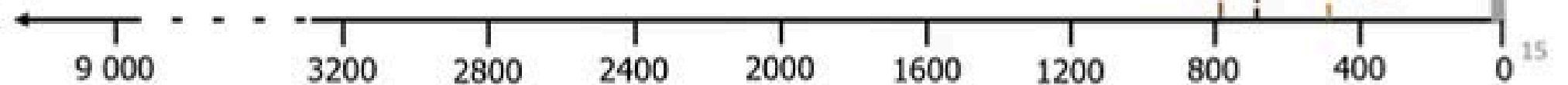


Sensibilité aux contrastes



Les oiseaux ne sont pas concentrés sur les éoliennes

Distances de détection maximales théoriques (en m) des éoliennes

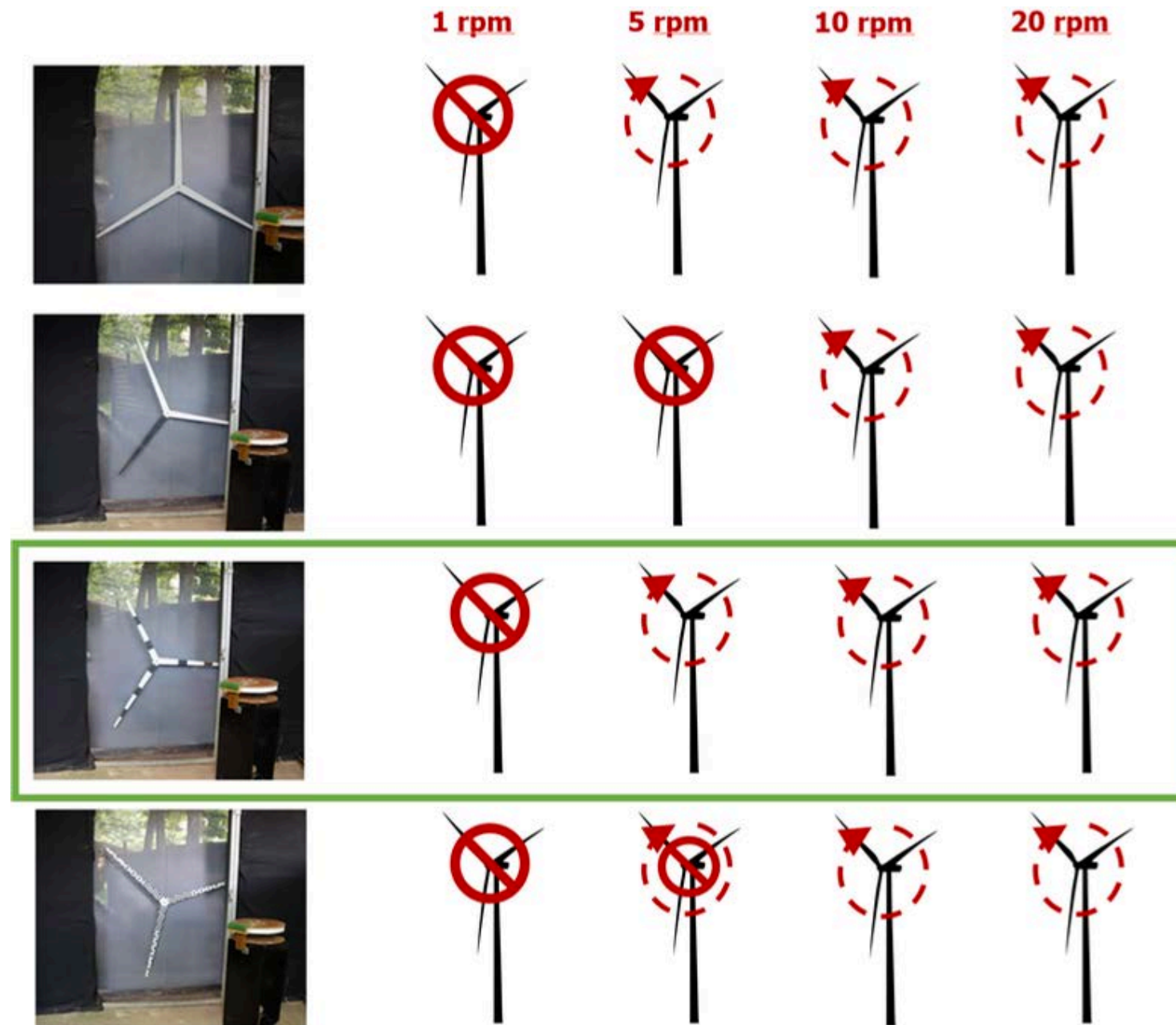




L'objet est-il en mouvement ?

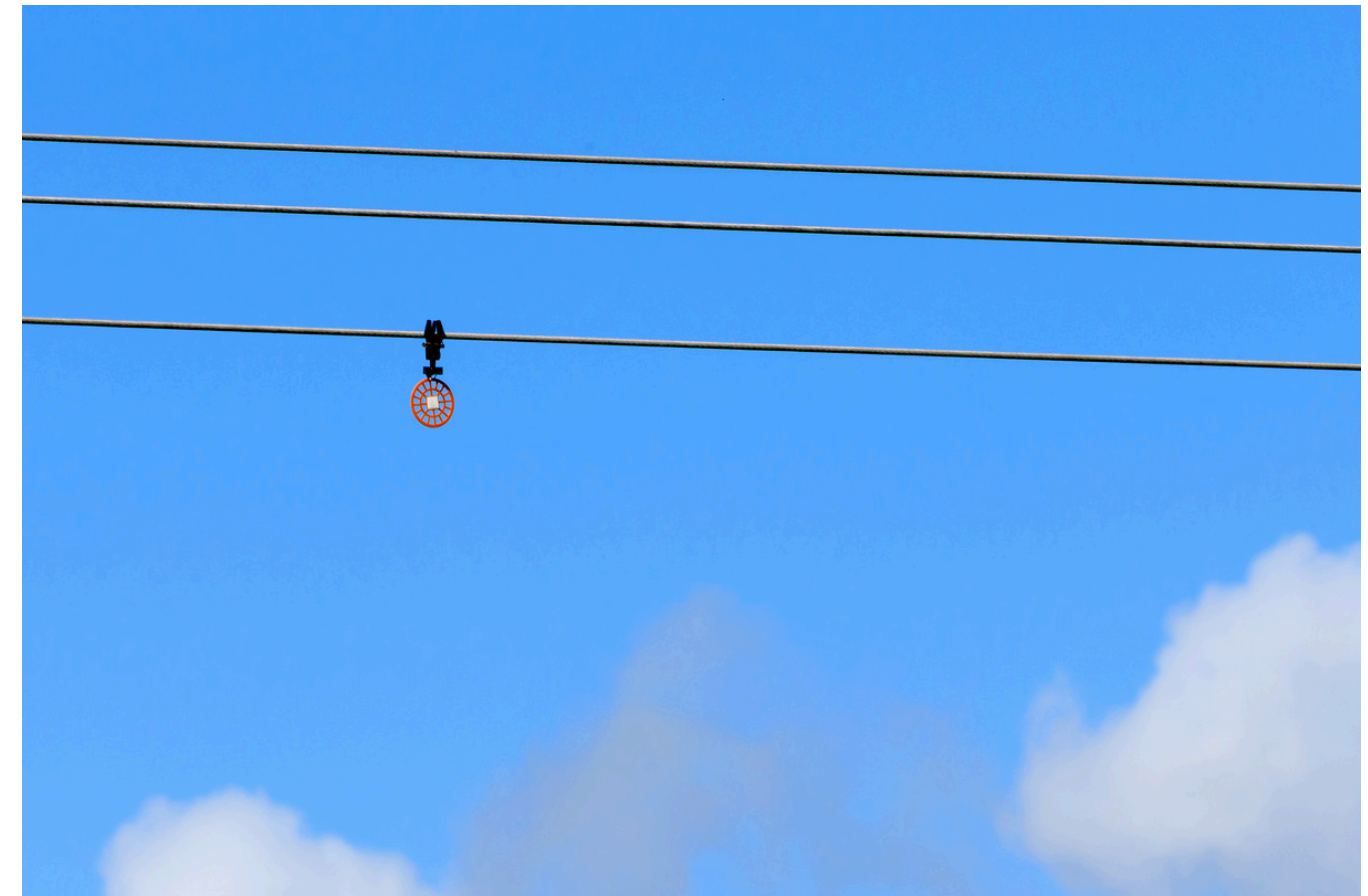


Perception des mouvements rotatifs





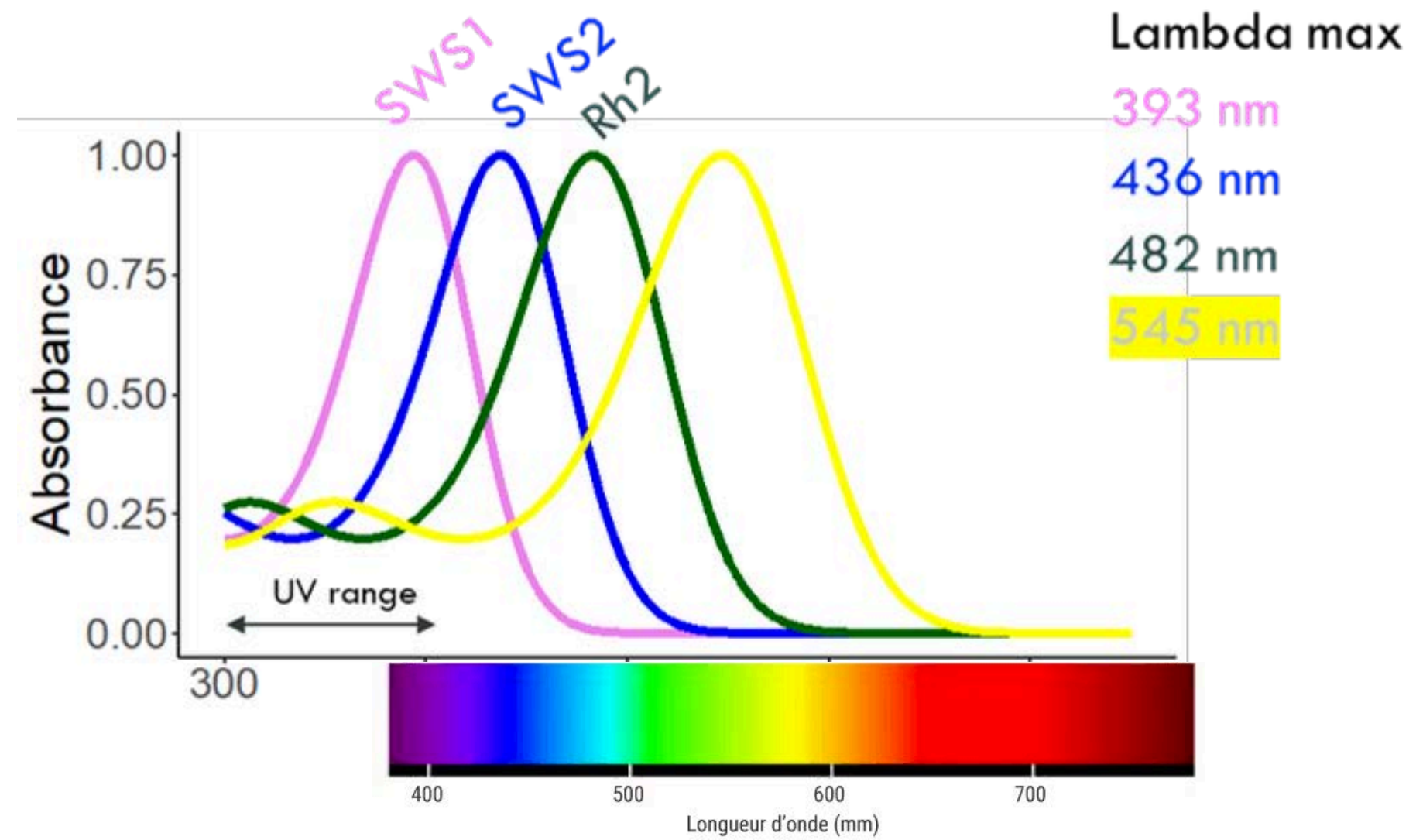
Les couleurs sont-elles perceptibles ?



Perception des couleurs



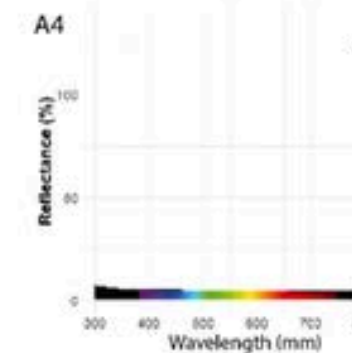
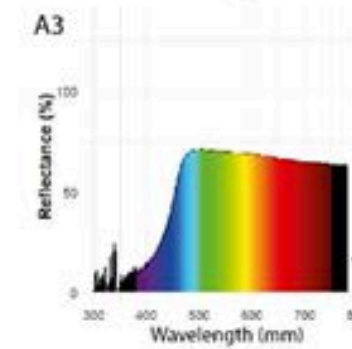
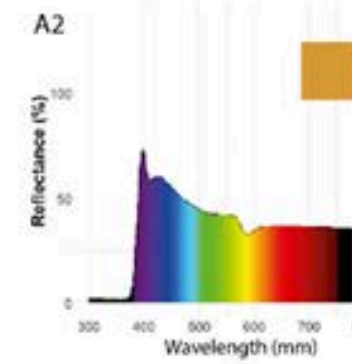
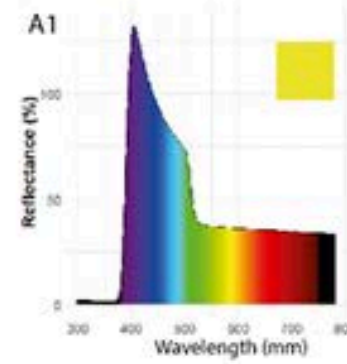
Perception des couleurs



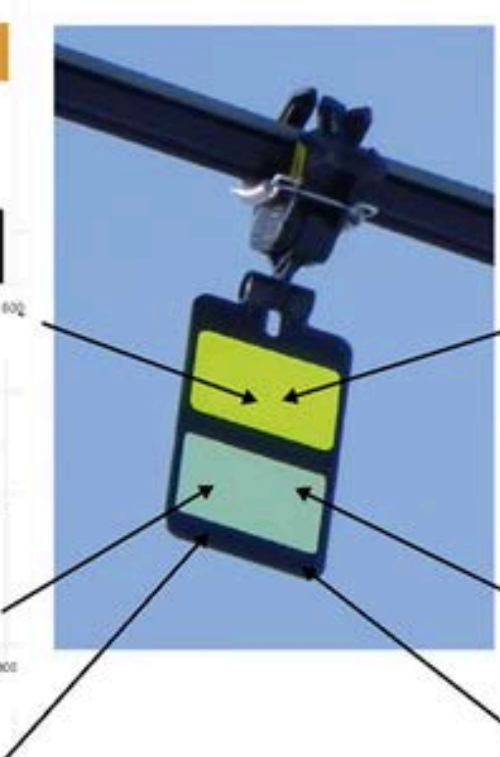
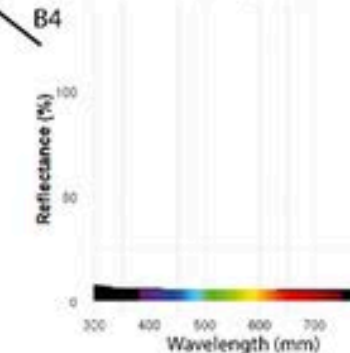
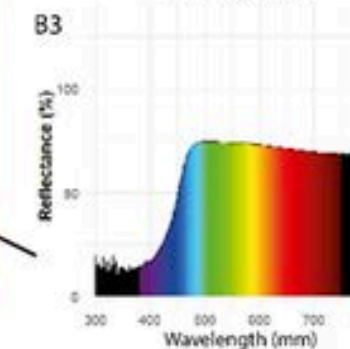
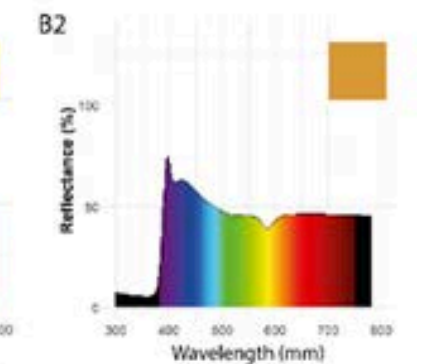
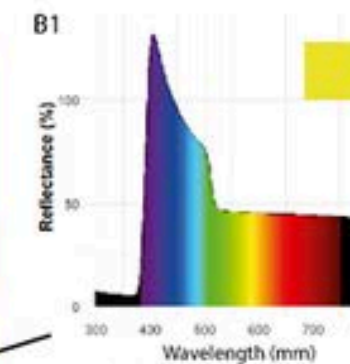
Perception des couleurs



A. DIFFUSE RAYS



B. DIFFUSE + SPECULAR RAYS





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