

Full name:

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First term Exam Corrigé type

Text:

Cataglyphis ants are one of the most characteristic and conspicuous insects of arid regions around the Mediterranean basin and can be seen running very rapidly, up to 20 meters per minute, during the hottest hours of the day. They are called “the thief of the cooking pot” in Arabic, and “thief” in Greek (due to their rapid stealing of food particles) or “Englishmen” (due to their activity in the hot midday sun at siesta time). They are highly heat-tolerant ants that forage close to their critical thermal limit during the hottest hours of the day, with their long-chain cuticular hydrocarbons protecting them from desiccation. Two main reproductive strategies are exhibited by species of this genus: some reproduce classically, by independent colony foundation following nuptial flight, whereas others reproduce by colony fission. In *Cataglyphis cursor*, queens are able to produce new queens by the lytoky, a phenomenon that was later found in four other ant species. This ability does not exist in any other *Cataglyphis* species, attesting to the great variety of reproductive strategies in this genus. The genus comprises more than 100 species that are easily identifiable, do not sting, and form small colonies (from hundreds to a few thousand members). They were studied extensively from many aspects, including orientation, systematics, ecology, and reproductive strategies.

Text from: *Cataglyphis* desert ants: a good model for evolutionary biology in Darwin’s anniversary year—A review (Lenoir et al, 2009)

A) Reading comprehension:

Say whether the following statements are true or false according to the text (5pts):

- *Cataglyphis* ants are insects of wetlands around the Mediterranean basin. (False)
- High temperatures are supported by *Cataglyphis* ants. (True)
- These ants reproduce through four reproductive strategies. (False)
- Queens are able to produce new queens in some species of ants. (True)
- Few studies have been conducted on the genus *Cataglyphis*. (False)

B) Lexis:

- 1- Find in the text words that are similar in meaning to the following (3pts):

Dry = arid /Extremely =highly

Breed = reproduce

2- Find in the text words that are opposite in meaning to the following (3pts):

Far \neq close /Coldest \neq hottest

Large \neq small

C) Change the following sentences into negative. (4pts):

- In all vertebrates, the mouth is found at the anterior end of the animal.
- In all vertebrates, the mouth is not found at the anterior end of the animal.
- Wing shape and size determine the flight style in birds.
- Wing shape and size do not determine the flight style in birds.
- Arab people called *Cataglyphis* ants “the thief of the cooking pot”.
- Arab people did not call *Cataglyphis* ants “the thief of the cooking pot”.
- The queen produced a new queen by the lytoky .
- The queen did not produce a new queen by the lytoky .

D) Translate the following terms into French (5pts):

- Exoskeleton = exosquelette.
- Backbone = colonne vertébrale.
- Molt = muer.
- Lungs = poumons.
- Larva = larve.
- Legs= pattes.

Consultation:
Le 17/01/2019
Amphi A
à 14:30