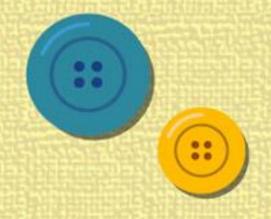# The condition that *Lepidostoma Rambur* make their houses.
Ko Sugiura

Introduction

- Lepidostoma Rambur（カクツツトビケラ属）

  Trichoptera,Lepidostomatidae

  トビケラ目、カクツツトビケラ科

- The larva lives around fallen leaves in the river.

- They make their nests using dead leaves, wood chips and so on.

Purpose

- Lepidostoma Rambur can make their house very quickly.

1. What kind of material does Lepidostoma Rambur use to make nests.

2. When they lost their nests, they rob other individual of nests or not.

Methods

experiment1

- Mesure strengs and weight of leaves and plastic.

  leaves:chestnut(green,dead)クリ

  walnut(dead)クルミ

  plastic:PET bottle label

- Cut leaves and plastic in 1cm×1cm

Methods

	shale 1,2	shale 2,3	shale 5,6	shale 7,8	shale 9~12
30~ 40% destroy	G	B	Y	W	G B Y W
100% destroy	G	B	Y	W	G B Y W

Methods

experiment2

- Prepair 4 caddish flies (Big×2,small×2).
- 100% destroy 1 big one and small.
- Put them into shale.
- Observe

Shale 13	shale 14
Big(destroy)	Big
small	small (destroy)

Hypothesis

experiment 1

- soft material→weak
- hard or heavy material→difficult to design

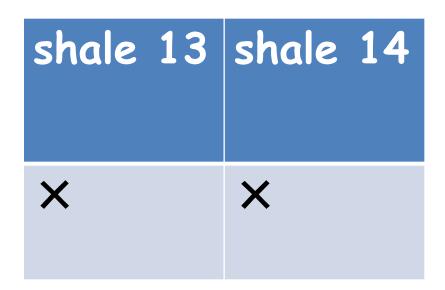experiment 2

- They can`t rob other`s nests at any time

Result

- material

	strengs(g)	weight(g)
chestnut	121.32	0.028
chestnut(dead)	102.26	0.012
walnut(dead)	61.61	0.022
plastic	over260	0.004

Result

- Built nests or not

1 G 30~40%	2 G 100%	3 B 30~40%	4 B 100%	5 Y 30~40%	6 Y 100%	7 W 30~40%	8 W 100%	9 GB YW 30~40%	10 GB YW 30~40%	11 GB YW 100%	12 GBY W 100%
✕	✕	✕	✕	◯	◯	✕	✕	✕	✕	✕	✕

Result

Result

- Robbed or not

shale 13	shale 14
✕	✕

Conclusion

- strengs of materials
 walnut(dead)<chestnut(dead)<chestnut<<plastic

- weight of materials
 plastic<chestnut(dead)<walnut(dead)<chestnut

- Walnut leaves can be used as a material of nests.

- Lepidostoma Rambur dosen`t rob other`s nests..

Discussion

- Why Lepidostoma Rambur doesn`t repair their house except two larvas?

→not enough time

→plastic and green leaves are too hard

- Lepidostoma Rambur doesn`t rob other`s nests.

→can easily make another nests in natural environment

Thank You