

## **Entomology Escape: Dr. Blatt's Assistant**

### **Scenario:**

You are a young lab technician working with Dr. Blatt on some insect research. Today, you arrive at the lab and notice Dr. Blatt is gone but she has left a note for you saying that she has made a very important discovery! Now, she'd like to promote either you or her other technician, Randy, to be her assistant...this will result in scientific fame and fortune for whoever gets this job!

To decide who will be her new assistant, Dr. Blatt has set up some puzzles to test your problem solving skills. She has hidden the contract for the new assistant in a lockbox and you will have 20/30/45/60 minutes to find it before your rival technician does! Along the way, you'll learn a lot about insects and prove to Dr. Blatt that you are worthy!

# Employment Contract

## Statement of main terms and conditions of employment

**Employer's name:** Dr. Odea Blatt

**Employee's name:**

**Main place of work:** Entomology Lab

**Job title:** Personal Lab Assistant

**Duties and responsibilities:**

Work with supervisor to study and implement insect-growth research. The employer may require you to carry out other reasonable duties as required.

**Note:** Risk for mutant insect monster creation from this research is high; employer not held responsible for work-related injuries.

**Probationary period:**

There will be a probationary period of three months. At the end of this period the position will be reviewed and, if you are still alive, the continuation of your employment will be confirmed. During the probationary period either party can terminate employment by giving one week's notice.

**Hours of work:**

Your hours of work will be:

40 weekday hours

20 weekend hours

Because of the unpredictable nature of this work, there is a need for the employee to be flexible and these hours may be changed as required according to the employer's needs. Under these circumstances, where hours need to be changed or additional hours worked, the employer will give as much notice as possible.

**Salary:**

As an hourly paid employee, your salary will be \$13.50 per hour for weekdays and for \$14.00 per hour for weekends. Your salary is payable biweekly and will be paid on Mondays.

**SIGNATURE:**

Name of Employee, Date:

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Employer:

*Dr. Odea Blatt*

*Dear Technicians,*

*Our research has paid off! I have perfected the insect-growing formula, and I want to make one of you my new assistant. I have gone to a meeting, but have left the job contract in the lab. However, you will have to work to get it...I want someone with good problem solving skills as my assistant, so I have hidden it in a lockbox. I should be back in 20 minutes, and whichever of you have found the contract by then will become my new assistant. This research will take the world by storm...everyone will want a cat-sized roach as a pet!*

*Good luck!*

*Dr. Blatt*

*Dear Technicians,*

*Our research has paid off! I have perfected the insect-growing formula, and I want to make one of you my new assistant. I have gone to a meeting, but have left the job contract in the lab. However, you will have to work to get it...I want someone with good problem solving skills as my assistant, so I have hidden it in a lockbox. I should be back in 30 minutes, and whichever of you have found the contract by then will become my new assistant. This research will take the world by storm...everyone will want a cat-sized roach as a pet!*

*Good luck!*

*Dr. Blatt*

*Dear Technicians,*

*Our research has paid off! I have perfected the insect-growing formula, and I want to make one of you my new assistant. I have gone to a meeting, but have left the job contract in the lab. However, you will have to work to get it...I want someone with good problem solving skills as my assistant, so I have hidden it in a lockbox. I should be back in 45 minutes, and whichever of you have found the contract by then will become my new assistant. This research will take the world by storm...everyone will want a cat-sized roach as a pet!*

*Good luck!*

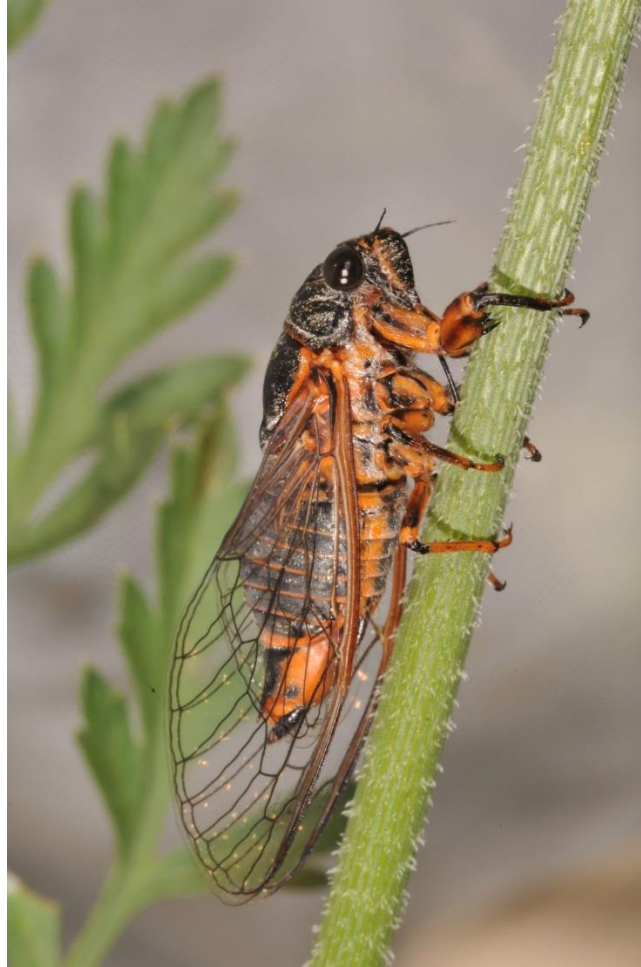
*Dr. Blatt*

*Dear Technicians,*

*Our research has paid off! I have perfected the insect-growing formula, and I want to make one of you my new assistant. I have gone to a meeting, but have left the job contract in the lab. However, you will have to work to get it...I want someone with good problem solving skills as my assistant, so I have hidden it in a lockbox. I should be back in 60 minutes, and whichever of you have found the contract by then will become my new assistant. This research will take the world by storm...everyone will want a cat-sized roach as a pet!*

*Good luck!*

*Dr. Blatt*

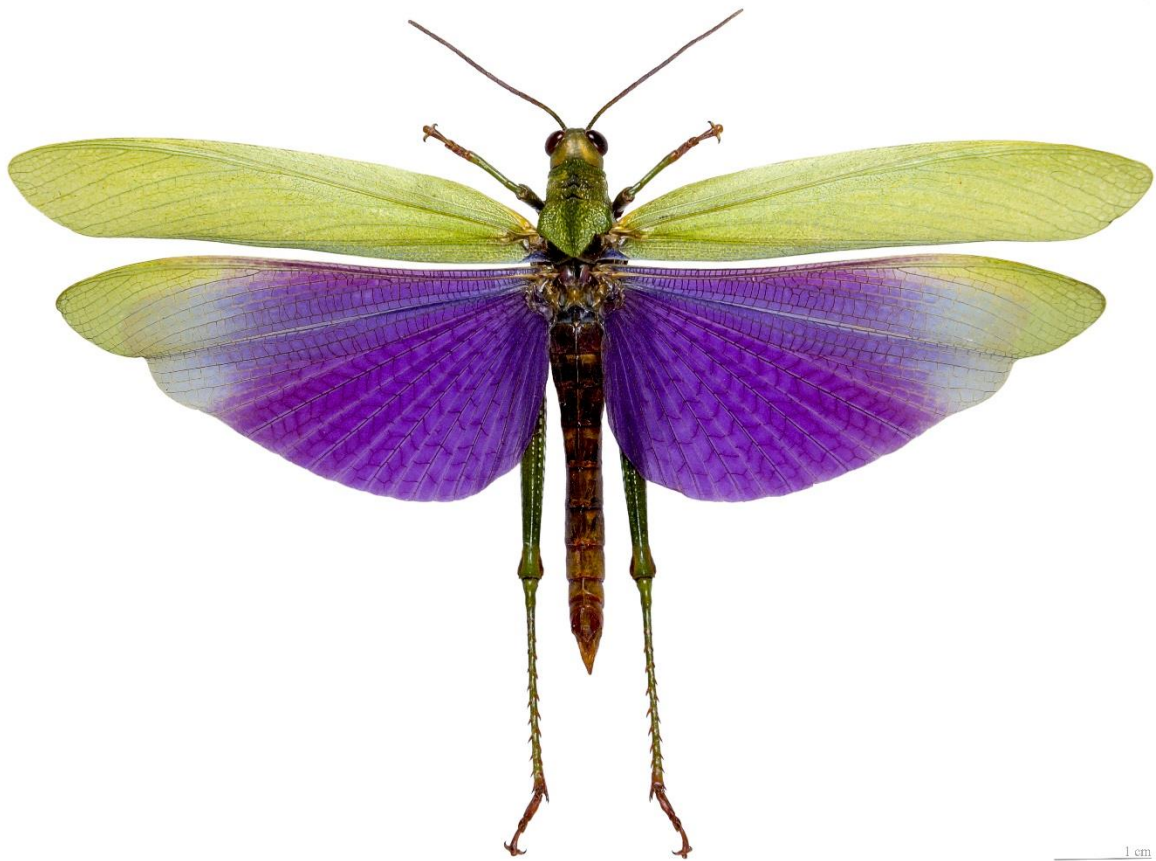


## **Cicada**

Cicadas belong to the insect order Hemiptera. All insects in this order have a piercing/sucking mouthpart that works like a needle/straw combination!

Cicadas are large insects and suck out plant juice. They have gradual metamorphosis, which means they have an egg, nymph (young cicada), and adult stage. When they are nymphs, they live underground and feed on roots, and then emerge as adults. In some species, the young can even spend 13-17 years underground!

These are noisy insects! They are what you hear in late summer in the evenings...a loud, buzzing sound from the trees.



## **Grasshopper**

Grasshoppers are in the insect order Orthoptera. They go through gradual metamorphosis, which means they have three stages to their lives...egg, nymph (young grasshopper), and adult. Only adults have fully functional wings!

Grasshoppers have chewing mouthparts and eat and damage all sorts of plants. They can be pests in both gardens and cropland.





## Praying Mantis

The praying mantis is in the insect order Mantodea. In Nebraska, we have two species, the smaller *Carolina mantis*, and the larger (up to 4 inches!) *Chinese mantis*.

These insects are predators, eating a variety of insects such as moths, grasshoppers, beetles, or whatever they can get ahold of! They lie in wait until prey gets near them, then they strike, holding their prey with their spiky “praying” front legs and eating the insect alive!

These insects almost look like little aliens, with a triangular head and large eyes! The females will lay a giant egg mass called an “ootheca” in the late summer or early fall, but of the 100 or so baby mantids that hatch, only a few will survive until adulthood!



## **Rhinoceros beetle**

Rhinoceros beetles belong to the insect order Coleoptera, and are a member of the scarab beetle family (like in ancient Egypt!) They go through complete metamorphosis, which means they have four stages: egg, larva (worm-like creature called a grub), pupa (resting stage, similar to a caterpillar cocoon), and adult. The males, like the one above, have huge horns to help with defense. They are one of the largest and strongest insects!

As fierce as they look, however, they can't harm humans, and they actually are vegetarians, eating rotting wood, fruit, or nectar.



## **Weevil**

Weevils are long-snouted beetles within the insect order Coleoptera. They go through complete metamorphosis, with an egg, larva (worm-like), pupa (resting stage similar to a butterfly cocoon), and adult beetle.

Weevils can be pests of all sorts of plant material, including flowers, crops like cotton and rice, flour, and grains. Yes, you can find them in foods you eat!

<b>H</b>	<b>O</b>
<b>A</b>	<b>C</b>

***Beautiful butterflies, green, blue, and pink.  
Read all about them, see what you think.***

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***Cicada and weevil orders are a clue,  
Using the first letters will give it to you.***

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Technicians,

Scorpions are not insects, but are arachnids, just like spiders. Scorpions are predatory animals that are nocturnal, meaning they are active at night. They **use** their large pinchers and venomous stinger to capture and subdue their prey. During the day, they hide **below** rocks or in holes. Did you know that if you shine a **blacklight** on them that they will glow in the dark? This is because they have fluorescent chemicals in their exoskeleton!

Solve the **puzzle** on this page and you will learn more about scorpions and be one step closer to becoming my assistant!

Dr. Blatt



## Scorpion Word Find

N	S	E	L	U	D	Y	M	F	R	I
O	D	R	A	R	I	O	B	N	Y	V
T	M	O	N	K	N	Y	L	B	E	E
E	P	T	R	Z	H	W	A	N	J	N
L	I	A	U	B	C	S	C	I	Q	O
E	N	D	T	M	A	T	K	I	F	M
K	C	E	C	H	R	I	L	I	M	L
S	H	R	O	Y	A	N	I	F	J	N
O	E	P	N	C	U	G	G	F	B	X
X	R	R	Z	Q	U	K	H	U	Y	W
E	S	K	B	O	X	K	T	A	Y	V

ARACHNID
BLACKLIGHT
EXOSKELETON
NOCTURNAL
PINCHERS
PREDATOR
STING
VENOM