



Cold
Spring
Harbor
Laboratory

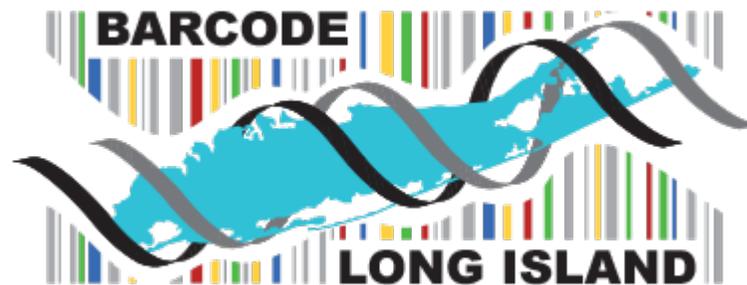
DNA LEARNING CENTER



Barcode Long Island

Developing Titles and Scientific Writing
Campaigns and Independent Projects

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Titles should be scientific and eye-catching

Avoid vague question titles:

e.g., “What are the Ants in my School’s Garden?”

A better title:

“Ant diversity of the JP Memorial Garden at Petracca High School”

Developing a title

Title: *What question was studied? Who did the research?*

- The title of a scientific research summary should convey to the reader in very few words the major question being investigated and the major answer obtained from the research.
- The title is the section of the report where you have the most freedom to be creative and grab the readers' attention. The only real rule is to be accurate and concise in your description of your research.

Take a second and improve on my title...

Identifying the bugs found in spring and fall at the DNALC

Pause the video

Resume when you think you've improved on my title



Here's what I came up with...

An investigation of seasonal terrestrial invertebrate biodiversity
as a measure of CSHL DNALC ecosystem health using DNA
barcoding

Science Writing

- Precise
- Get to the point
- Elevated vocabulary only when necessary
- Inclusion (don't leave your readers in the dust)
- Good flow and organization
- Use an appropriate "voice"
- ***No quotations*** – everything should be in your words and a legitimate use of quotations in science writing is rare.

How could we improve these proposal excerpts?

Example 1:

Urbanization is happening all over the globe. The number of insect species has decreased. Greater urbanization on Long Island has caused insect biodiversity to decrease. We will use DNA barcoding to see if this is true.

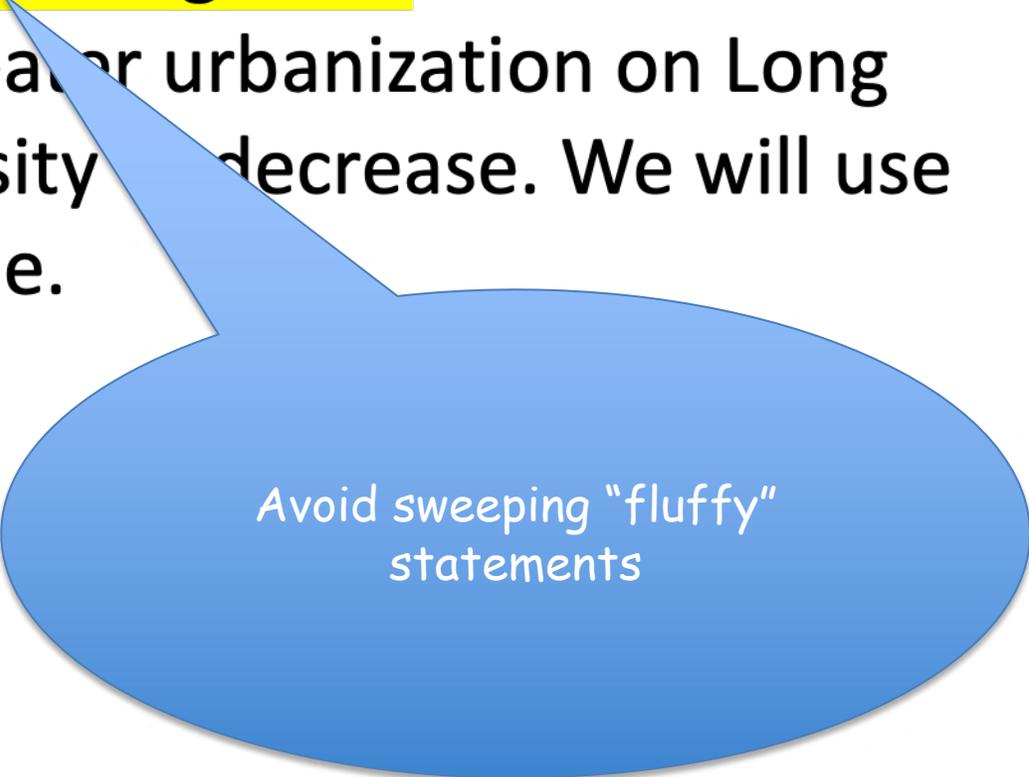
Pause the video

Resume when you think you've improved on this excerpt

How could we improve these proposal excerpts?

Example 1:

Urbanization is happening all over the globe. The number of insect species has decreased. Greater urbanization on Long Island has caused insect biodiversity to decrease. We will use DNA barcoding to see if this is true.



Avoid sweeping "fluffy" statements

How could we improve these proposal excerpts?

Example 1:

Urbanization is happening all over the globe. **The number of insect species has decreased.** Greater urbanization on Long Island has caused insect biodiversity to decrease. We will use DNA barcoding to see if this is true.

Okay, but no flow from the previous sentence

Also, citation?

How could we improve these proposal excerpts?

Example 1:

Urbanization is happening all over the globe. The number of insect species has decreased. **Greater urbanization on Long Island has caused insect biodiversity to decrease.** We will use DNA barcoding to see if this is true.

Fine, but is this organized well? Does it fit here or should we start a new paragraph?

Also, what's biodiversity?

How could we improve these proposal excerpts?

Example 1: excerpts?

Urbanization is happening all over the globe. The number of insect species has decreased. Greater urbanization on Long Island has caused insect biodiversity to decrease. **We will use DNA barcoding to see if this is true.**

Good flow from previous sentence, but again we see a term that your reader may not know!

Example 1:

Better:

Widespread urbanization may be linked to a loss in insect biodiversity worldwide (Petracca, 2023). That is, the global distribution of insect species seems to have decreased alongside the growth of cities (Petracca, 2023).

Therefore, insect biodiversity has likely decreased across urbanized Long Island, as well. We will collect insects at several sites across LI and assess insect diversity using DNA barcoding to assist in species identification.

How could we improve these proposal excerpts?

Example 2:

Specimens will be processing according to the following protocol:

- 1) Collect specimens
- 2) Extract DNA
- 3) Conduct PCR

Pause the video

Resume when you think you've improved on this excerpt

How could we improve these proposal excerpts?

Example 2:

Specimens will be processing according to the following protocol:

- 1) Collect specimens
- 2) Extract DNA
- 3) Conduct PCR

For a proposal, treat it like the methods of a paper. Write in paragraph form.

Also, watch for grammar errors: "processing"

Better:

Example 2:

Specimens will be collected using Berlese funnels throughout Fall 2023. DNA extractions will then be performed using the chelex DNA extraction protocol from the DNALC.¹ PCR will then be conducted to target and amplify COI.

How could we improve these proposal excerpts?

Example 3:

For these reasons, it is imperative that the exploration of their infestation to other vital members of the ecosystem be sought after to further prove just how negatively these beetles impact their surroundings.

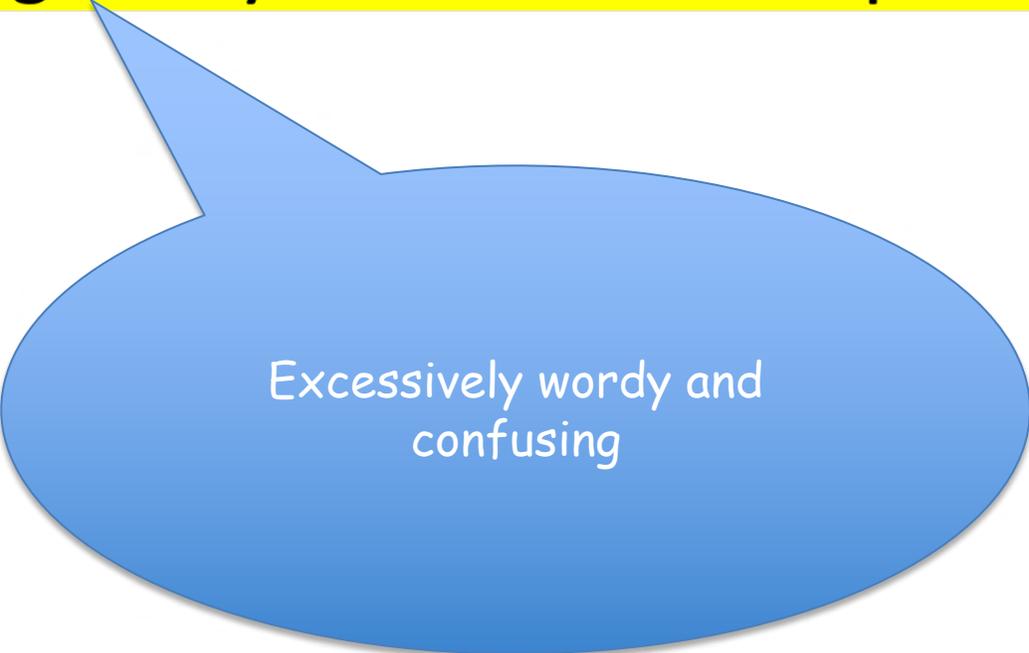
Pause the video

Resume when you think you've improved on this excerpt

How could we improve these proposal excerpts?

Example 3:

For these reasons, it is imperative that the exploration of their infestation to other vital members of the ecosystem be sought after to further prove just how negatively these beetles impact their surroundings.



Excessively wordy and confusing

How could we improve these proposal excerpts?

Example 3:

For these reasons, it is important to explore how the spread of these beetles might adversely affect other vital members of the ecosystem.

Questions?

New (as of BLI 2023):

Opportunity for once a month virtual office hour sessions with a BLI staff member!

Check with your mentor on dates and availability