Writing in EEB: General Guidelines

Writing is all about communicating ideas or data to others. To be effective, writing must be clear, with logical flows of sentences, paragraphs and the whole paper.

In this guide, we summarize EEB’s expectations for writing that is clear, direct, simple and concise. We expect students to use these styles in all of our classes; faculty and TAs who grade your work will be evaluating your written communication skills as well as your logic and results [Note: other departments have different preferences that you should follow in their courses.].

References for further reading and published sources used for this guide are listed on page 11.

THE BIG PICTURE: Always write with the reader in mind.
- Become a ruthless, critical editor — create multiple drafts based on thoughtful editing.
- Start with an outline/list — which you should think about critically after you think you have it all down. Then revise that list to improve the logical flow, and add or remove some points.
- Use your first draft to write all/any ideas you have.
- The second draft should be a small part of the first draft.
- Leave several days to make revisions — that helps you to view your work with ‘fresh eyes’ and to see problems.

TACTICS: How to write assignments or research papers. (see Appendix)

1. Plan ahead
   Don’t just write: start with an idea of what you want to say, such as a list that includes only essentials such as key words or bullet points. Make sure you cover all the points in the guidelines for your assignment.
   Important: think of this list as a first (rough) draft for your initial ideas; this is also a useful way to begin to organize a well-constructed answer for exam questions.
   • This is the place to edit for content — where you can add or remove points on the list — or revise the order (and it is much more efficient to do this here than after you start to write)
   • Leave enough time to edit several drafts of your paper

2. Write:
   • write a first draft by amplifying your outline
   • follow the writing guidelines below
   • proofread all of your writing carefully so that you can
   • edit your draft several times, checking for grammar, voice, conciseness and flow

3. Edit: be completely ruthless.
   • Editing means thoughtfully consider each sentence, paragraph and flow of the entire report/paper. You should plan to spend more time on editing than on actually writing your first draft (even of your list/outline).
• First, edit for structure and logic (easier if you first edited your outline for these). This means thinking carefully about the relationships among paragraphs and sentences. Are they in a logical order? Does each word, sentence and paragraph have a clear purpose? Are transitions between major points clear and strong?

• Second, edit for style, grammar, and the power of your sentences. Be especially careful that you do not fall in love with your own prose! You should always ask yourself whether your writing is clear enough to convey your ideas to your readers, not just that it is clear to you. NOTE: Checking your spelling is important – spell-checking routines on computers can be useful. But remember that they don’t distinguish between different spellings of words that sound alike but have very different meanings (e.g., to vs too; it’s vs its) or know how to spell specialized biological terms.

• Third (etc.) edit again, and again…..

• Most scientists go through many (many) drafts before they let colleagues see their papers, but it is a good idea to find a peer who writes well and ask him/her to go over a more polished draft. Impress on them that they should be ruthless about this: otherwise it is a waste of your time and theirs. You could also take advantage of writing help offered on campus. (paginate and date everything, so there is no confusion among versions).

• Make editorial changes using ‘Track Changes’ so that you can see where you’ve made the alterations. Keep older versions until you’ve completed the assignment or submitted the paper: you may decide that parts of an earlier version should be put back into the paper. One useful tool is to use footnotes to give date and possibly even time, as well as page numbers. You could also put the draft or draft number in the file name.

SCIENTIFIC PAPERS - SECTIONS:

Several topics specific to writing scientific papers in biology are given in the Special Topics section at the end of this guide.

Summary/Abstract (for proposals or reports):
An Abstract is always the last section of a paper to write, but is very important because it is the first, and often the only, portion of a paper that readers look at and will greatly influence whether they continue to read the rest of the paper.

Format: Write one paragraph: 6-8 sentences with the following flow (5 mini-sections) that essentially summarizes the Introduction, Methods, Results and Conclusions of your study.

1. Set out the general problem or question; this is critical because it gives the context and purpose for the research.
2. State what you are testing: your hypothesis (or your question).
3. What is your organism(s) or research system and why/how does it address #1?
4. In very general terms, what method(s) will you use (experimental, observational, mathematical)?
5. Summarize the key results of the study [not in a proposal]
6. Provide a general summary statement, including your conclusions (how the details of your project address the general problem you gave in the first sentence).

**Introduction:**
An introduction to a proposal or to a paper is essentially an expansion of the first part of the Abstract (or summary). Your introduction should have these components, preferably in the following order:
- the context for your work (i.e. big important questions)
- how your work links to this context
- your specific question
- your specific question often links to a description of the system (species, environment) you used to conduct the study
- your approach – could be general (e.g., field/lab, observations/experiments, mathematical models) or more specifics if you are at that stage.

More specifically, your Introduction should have 3-4 paragraphs:

1. **The opening paragraph is most important: it explains the context for your work and sets the stage for later details.**
   - **The first sentence** should state the context for the proposed research. This should be an informative and compelling general statement, and might be the most difficult sentence to write; it sets the stage for everything that follows. Do NOT use meaningless, general sentiments (conservation is good/needed; this theme is important because I am interested in it, little is known, etc.) because they use up precious space and are not informative. This can be the same first sentence that is in your abstract.
   - **The rest of the first paragraph** should give the rationale why this is interesting and important -- not to you, but to the scientific community. Saying that you will work on a project because 'little is known about it’ is not a compelling reason to do the research! So, be very explicit in your rationale. Include a sentence about the main, specific question/hypothesis of your work. Because this first paragraph provides context, including our current understanding of the problem and what previous studies have addressed this question, it should include several references to relevant published literature.

2. **The second paragraph** should explain the approach you will take...in very general terms. What type of system (e.g., habitat, species), monitoring program, experiments (field? lab?), modeling, how do you link your different approaches.....?

3. **The final paragraph** (depending on how you structure paragraph 1) could relate your work back to the broader theme you introduced at the start of the summary or to specific applications.

   - **NOTE:** only include material very relevant to your paper in this Introduction. All points or questions that you raise in this Intro should also be addressed in the Discussion section. Don't have any unneeded material in the Introduction.

   - See Example of an Introduction in Box 1.
Methods:
This section is where you explain what you did in enough detail that someone else could replicate your work. Think of all the details (first as a list) and then write this section. You can use graphs or pictures here as appropriate (e.g., what the site or species look like).
- Because you are describing what you did, the Methods are written in past tense.
- It is often easier to break this section into headers by category, e.g.: The study system (a description of when and where the study was conducted, including the environment and species) and then by the specific questions or hypotheses that are addressed with descriptions of the design (e.g., field/lab experiments) and specific methods (e.g., how samples were collected) and the statistical analyses used to test each specific hypothesis.
- Use these subheadings to link methods to questions and tests of hypotheses. Always state why you used a method before stating what or how you did it.
- Justify your methods. You need to convince readers that you used the most appropriate methods to test your hypotheses. Sometimes this requires providing some background on analytical techniques (especially lab instruments and genetic analyses) and explaining how the measurements bear on the tests of hypotheses.

Results:
- This section is where you present your results to readers.
- Depending on sentence structure and context, Results can be presented in past or present tense (e.g., prey density tripled in the absence of predators; mean prey densities triple in the absence of predators). Present tense is particularly common in describing results of models.
- Use distinct sections (with headings) to separate different aspects of the work. When possible, use the same subheadings you used in the Methods section so the reader can easily refer back to the Methods and the analyses used to generate the results you are describing.
- Use figures and tables to display your data. They should all have legends that are complete sentences. Explain each symbol (in legend or on figure) if you use more than one; explain the meaning of error bars or ± (standard error, standard deviation, range).
- Describe results in the text and point the reader to the supporting data by referring to tables and figures parenthetically at the end of the sentence. Do NOT just say —Results are shown in Figure 3. Be specific: —Biodiversity declined with the addition of nitrogen (Fig. 3). Be specific: e.g., —positively correlated instead of —correlated. Refer to magnitudes of effects (e.g., give effect sizes and confidence intervals) rather than just P-values. [from guidelines for the journal, Science]
- Only give the same data (any statistical results) in one place (text, graph or table).
- Present and summarize, but do not interpret the results. Interpretations are presented in the Discussion section.

Discussion:
- This is where you interpret and explain your results.
- Don’t repeat your results here, but point out important general patterns.
- Discuss how your results relate to other work (other papers, your text). Do they show the same or different patterns. Why?
• Identify caveats and how the study could have been enhanced (e.g., possibility of increasing the statistical power of tests when you failed to detect differences among treatment levels of an experiment; or use a different method).
• Describe the implications of the results for advancing our understanding of the problem and the field.
• Suggest next steps or new directions for future studies.
• Make sure that you pick up on all points that you made in the Introduction. …and don’t leave loose ends in the Discussion.

DETAILS OF WRITING: STYLE, GRAMMAR, STRUCTURE

Construct Powerful Sentences

Preferred writing styles in science have changed greatly in the last 30 years. The old view of writing, based on the idea that science must be „objective‟, was to use the passive voice (e.g., this was done and that was done). More recently, the active voice (and also using first person) has become the preferred writing style (e.g., I did this and we did that); it is much more direct, concise and easier to understand than passive sentence constructions. Today, most journals in biology – and even general science – prefer papers that have active writing styles.

**EEB wants you to: use active voice and first person as much as possible.** Sometimes, use of passive voice is needed for clarity – and to break up a string of sentences that start “I did …”. Be aware of the voice you use in each sentence and why you might want to use active or passive in particular circumstances. See Box 2 for preferred styles in a sample of journals.

**What Is the Active Voice?**

The active voice emphasizes the performer (or agent) of the action:

Wind disperses plant seeds.
Smith et al. investigated the relationship.
We have analyzed the results.

The active voice is direct (performer–verb–receiver), vigorous, clear, and concise. The reader knows who is responsible for the action.

**What Is the Passive Voice?**

The passive voice, in contrast, emphasizes the receiver (or product) of the action:

Plant seeds are dispersed [by wind].
The relationship was investigated [by Smith et al].
The results have been analyzed [by us].

The passive voice is indirect (receiver–verb–performer) and can be weak, awkward, and wordy. Passive voice uses a form of the verb to be followed by a past participle (e.g., dispersed, investigated) and a by phrase. If the by phrase is omitted (the truncated passive), the reader will not directly know who or what performed the action.

**NOTE:** A particularly awkward and ambiguous form of the passive voice occurs when an author uses it as the receiver rather than the
Example\(^1\): An example of active vs. passive:

In 1953, one elegantly written paper began:

“We wish to suggest a structure for the salt of deoxyribose nucleic acid (D.N.A.).”

The opening sentence of Watson and Crick’s classic article is **simple, direct, and clear**. But suppose the authors had taken the passive point of view:

*In this paper, a structure is suggested for the salt of deoxyribose nucleic acid (D.N.A.).*

The emphasis is now on the receiver of the action (the structure), but at a price—the sentence has lost its clarity *(who suggested?)*, energy *(passive verb)*, and overall impact.

---

**Be Concise**\(^2\): Don’t use unnecessary words.

Using the active voice will make your writing more concise. But there are several phrases and words that are commonly used but make writing too verbose. Examples:

<table>
<thead>
<tr>
<th>Avoid:</th>
<th>Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is no doubt but that</td>
<td>no doubt (doubtless)</td>
</tr>
<tr>
<td>The question as to whether</td>
<td>whether</td>
</tr>
<tr>
<td>Used for fuel purposes</td>
<td>used for fuel</td>
</tr>
<tr>
<td>He is a man who</td>
<td>he</td>
</tr>
<tr>
<td>In a hasty manner</td>
<td>hastily</td>
</tr>
<tr>
<td>This is a subject that</td>
<td>this subject</td>
</tr>
<tr>
<td>Their result is a strange one</td>
<td>their result is strange (or, their strange result)</td>
</tr>
<tr>
<td>The reason why is that</td>
<td>because</td>
</tr>
<tr>
<td>Owing to the fact that</td>
<td>because</td>
</tr>
<tr>
<td>In spite of the fact that</td>
<td>though (although)</td>
</tr>
<tr>
<td>The fact that</td>
<td>because, though</td>
</tr>
<tr>
<td>Call your attention to the fact that</td>
<td>remind you</td>
</tr>
<tr>
<td>I was unaware of the fact that</td>
<td>I was unaware that</td>
</tr>
</tbody>
</table>
But remember, the most overused word in most writing is “the”. It can often be removed without losing meaning.

Excellent suggestions and more examples of these approaches to writing more concisely (and less ambiguously) are presented in all of the references.

**Examples of editing for conciseness**:  

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Dr. Smith’s research investigated the effect of pesticide on the reproductive biology of birds.</td>
</tr>
<tr>
<td>maybe</td>
<td>Dr. Smith investigated the effect of pesticides on the reproductive biology of birds.</td>
</tr>
<tr>
<td>√</td>
<td>Dr. Smith investigated the effect of pesticides on avian reproduction.</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>It was found that the shell lengths of live snails tended to be larger for individuals collected closer to the low tide mark (Fig. 1).</td>
</tr>
<tr>
<td>better</td>
<td>Live snails collected near the low tide mark had greater average shell lengths (Fig. 1).</td>
</tr>
<tr>
<td>better</td>
<td>Snails found closer to the low tide mark typically had larger shells (Fig. 1).</td>
</tr>
<tr>
<td>√</td>
<td>Snails found closer to the low tide mark typically had larger shells than those further away (Fig. 1).</td>
</tr>
</tbody>
</table>

**Avoid weak verbs**:  

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Plant vascular tissues function in the transport of food through xylem and phloem.</td>
</tr>
<tr>
<td>better</td>
<td>Plant vascular tissues transport food through xylem and phloem.</td>
</tr>
<tr>
<td>√</td>
<td>Plants transport nutrients through their vascular tissues, xylem and phloem.</td>
</tr>
</tbody>
</table>

**Make the organism the agent of the action**:  

- Authors should guide and influence readers.
- Establish importance: word location (power) within a sentence.
The problem with the first sentence ("Studies …show….") is that it leads with the word ‘studies’, while what you want the reader to know is that ‘rats vary’.

Example^2:

- a Although vitamin B6 seems to reduce the risk of macular degeneration, it may have some side effects.
- b Vitamin B6 reduces the risk of macular degeneration, but it may have some side effects.
- c Taking vitamin B6 may have some side effects, but vitamin B6 also reduces macular degeneration.
- d Although taking vitamin B6 has some side effects, vitamin B6 reduces macular degeneration.

COMMON GRAMMAR PROBLEMS^2-4:

1. Among/between:
   - between – refers to only 2 things.
   - among – refers to >2 things.

2. Which/that:
   - which – introduces a nondefining clause (it is basically an aside) and is used after a comma.
   - that – introduces a defining clause that gives specific information about a particular item.

This is a big difference and affects the meaning of the sentence:

- Flowering plants, which have green leaves, have high photosynthesis.
  (This implies that all flowering plants have green leaves and is not correct.)

- Flowering plants that have green leaves, have high photosynthesis.
  (This refers specifically to those flowering plants that have green leaves and is correct.)
3. Its/it’s:
   It’s abbreviates _it is_.
   Its designates ownership.

4. Effect/affect:
   Effect – as a noun, means a result.
   it can also be a verb that means “to bring about” (but it is passive and weak – so avoid it if possible).
   Affect – is a verb that means “to influence” or “to produce an effect on”.

   ➔ The effect of birds is to reduce seed survival.
   ➔ Birds affect seed survival.

5. i.e./e.g.
   i.e. stands for ‘id est’, which means _that is_. It is used to clarify a statement or example.
   e.g. stands for ‘exampli gratia’, which means ‘for example’. It is used to give an example of a statement you just made.

6. Fewer/Less
   Fewer – refers to numbers: use with quantities or counts.
   Less – refers to quantity: use with mass nouns (which you can’t count individually).

   ➔ She had fewer apples than I did.
   ➔ He had less energy.

7. Data are or data is?
   This is a tough one because the accepted use of _data_ as a plural noun (the data are…) has recently changed because it was misused so often. Some instructors will accept it as a singular noun (the data is…[because that implies that the data represent a collection of information]).
   But: there is a good case to be made to stick with the original usage – and to remember that the singular of data is datum or anecdote (= only one data point).

8. Tenses:
   Past tense: for observations, completed actions, and specific conclusions.
   Present tense: for generalizations and statements of general validity.

   A sentence can also have mixed tenses:
   Sultan _observed_ that certain species of bacteria _respond_ to light stimuli.

9. While/Whereas
   “While” refers to time (e.g., this happened while that happened). If making contrasts that do not involve time, use “whereas” (e.g., Whereas horses are larger than people, their brains are smaller.)
Other important style issues:

- Avoid jargon; explain obscure terms and define acronyms (many readers will not know specialized terms). Additionally, in assignments the instructor also wants to know that you understand the terms.

- Avoid using "-fold" because expressions such as "20-fold smaller" are imprecise; use percentages, proportions, orders of magnitude, or "factor of" instead.

- Avoid using "times more" or "times less" (see above).

- Use "significant" only when discussing statistical significance. “Substantial” or “marked” are good substitutions when not referring to a statistical significance.

Paragraphs:

- First and last sentences are power positions.
- Usually, the first sentence introduces the topic of the paragraph and gives the reader a direction of where the paragraph is going…. or it can also be a transition from the previous paragraph.
- The last sentence can summarize, draw a conclusion, or emphasize something of importance.
- A well written paragraph generally gives an overview first and then goes into detail.
- The "psychological geography" of the sentence structure is particularly important.

Think clearly about the flow of sentences and paragraphs:

Use flow to create linkages.

Example 2: Go from:

- General
- Specific
- even MORE specific

**Macular degeneration** is affected by **diet. One of the diet components** that influences the progression of macular degeneration is **vitamin B6**. Although **vitamin B6** seems to reduce the risk of macular degeneration, it may have some **side effects**.

Information at the end position of a sentence is placed at the beginning, or topic position of the next sentence.

Or, for an even punchier, shorter and more concise paragraph: combine sentences 2 & 3: While vitamin B6 influences the progression of macular degeneration, it may have some side effects.
AN IMPORTANT POINT: PLAGIARISM

Plagiarism is unethical and a very serious issue. *Never do it:* your grade could be seriously reduced, you could be placed on academic probation, or you even can get expelled.

One way to guard against unintended plagiarism is to take notes as key words only and then to use your own words as you write. If you need to quote portions of someone's work from any published material (print or online) (or even something unpublished but not your work) then you MUST give your source. We've done this in this guide, using the number format. Simply changing a few words here and there is still considered plagiarism.

Plagiarism is now very easy to detect simply by googling a portion of text. Experienced faculty and TAs can spot potential plagiarism because the writing style changes or the paper contains information that it is unlikely for an undergraduate to know.

One common excuse students give for plagiarism is that they simply didn't have time (3 finals the day before, work 25 hours a week, someone died….). If you really have a problem submitting the assignment on time, then explain it to your teacher and ask for an extension. In many cases, you'll get it; in some cases your grade might be reduced a bit or if it is a major assignment, you could get an Incomplete that you can change later. But, these are all much better than the consequences of getting caught.

References:
1 Biomedical editor: http://www.biomedicaleditor.com/active-voice.html
SPECIAL TOPICS IN WRITING FOR EEB AND BEYOND

1. Where do you edit?

There is a difference between editing (thoughtfully considering how to improve your text) and changing text. Computers have made it easier to make changes, but (in many cases) they may also reduce the likelihood of thoughtful editing.

Scientists differ in how they edit, and some change tactics as they gain experience and improve editing skills. Here are some general guidelines for you.

- Initially only edit on a computer for minor changes (e.g., spelling, tenses within sentences and paragraphs).
- First, edit a paper version and then use your computer to implement these editorial changes.

Why?
1) We tend to focus more intently on printed words than words on a screen.
2) It is easier to retrace your changes and to alter some/all before you commit to modifying the text. Editing on a printed copy always leaves the option to decide that your original version was better.
3) It is very hard to see big organizational changes that are usually needed, such as taking parts of two paragraphs that are on different pages and moving them to the start of a different paragraph 3 pages later.

For outlines, sentences and paragraphs, it is often easier to indicate additions, cross-out words or ideas or draw arrows to change the order.

This is especially true if you can’t see the whole paper on the screen at once; whereas with paper, you can compare several pages side-by-side to see if paragraphs (or parts of them) should be moved up or down.

- It is often difficult to see large sections of the document at once for formatting (scrolling up and down is difficult) and especially for comparing assertions in the text with results in tables or figures. Recommendation: use a split screen for these purposes.
- Use track changes to see previous changes; share edits with co-authors or instructors (each use a different color). This also allows electronic changes.
- Once you start altering your paper on a computer, remember to save the file fairly often – so that you only lose change since the last save, and not the whole session. Some word processing files allow you to specify timing of automatic saves (e.g., every 10 min.).
- Use header or footer to identify different drafts.
- Use different file names for each draft (or add date).
2. Using common and scientific names

Biologists have very specific conventions for referring to common and scientific names.

- Introduce the common and scientific name the first time you refer to a species (e.g., To better understand how aspects of the kelp forest environment influence the distribution and abundance of species, we tested for a relationship between density of the blue rockfish, *Sebastes mystinus*, and density of the giant kelp, *Macrocystis pyrifera*).

- Common names are never capitalized unless (1) it is a proper name (e.g., California banana bug) or (2) it is a bird. For some reason bird people capitalize common names, but this is unique relative to all other animals or plants.

- Scientific names are ALWAYS italicized or underlined (italicized is preferred).

- Capitalize the name of the genus, but not the species (except for special cases where the species is named for a person).

- From that point on, you can abbreviate the scientific name as *S. mystinus*.

3. Tables and Figures

- Figures and Tables are numbered and presented in the order that they are referred to in the text.
- Both table and figure legends should fully describe what is presented in the table or figure and the result you are trying to convey. Start with a sentence indicating what the table or figure is meant to convey, then describe in greater detail what is presented, including the definition of variables (e.g., *n* = the number of samples) and symbols (could be in legend or on the figure).
- If tables and figures are presented at the end of a manuscript, tables are presented immediately after the Literature Cited section, followed by a list of Figure legends, then the Figures. There are two ways to include tables in a Word document. You can create simple tables directly in Word or you can insert more complicated tables made in other programs (e.g., Excel) by copying a table and pasting it as a picture in the format of an enhanced metafile. After copying the table in Excel, use Paste Special in Word to select picture (enhanced metafile) to paste it into Word and move to where you want in the document.
- Similarly, copy a graph from Excel, Powerpoint or some other graphics program and Paste Special in Word to select picture (enhanced metafile) to paste it into Word and move to where you want in the document.

4. Citing References in the text and in a Bibliography

- The style used to cite references within the text and how it is presented in the Literature Cited is varies among journals. Look at the journal or proposal guidelines to see the proper style. OR:
In the absence of a predefined style for citing literature in the text (e.g., the numerical citation style used in this guide), use the following common rules:

- list the author by last name only followed by the year of the publication (Kay 2011) or (Kay and Pitterman 2010)
- for articles with more than two authors use the first author and “et al.” (e.g., Pitterman et al. 2010)
- for multiple publications within the same sentence, list publication in chronological order from oldest to most recent (Sinervo 1990, Pogson and Fox 1998, Thompson 2002)

Note: In this guide, we use a different format that is found in a few journals → citing the references in the text by using superscript numbers.

In the absence of a predefined style for the Literature Cited section, use this common style: authors, year of publication, title of article, journal, issue:page numbers. For example:


If referring to a chapter in a book, list the authors of the article, the year, the title of the article, “in”, the names of the book editors, title of the book.


NOTE that only the first word of a journal article is capitalized (except for proper nouns such as California, Raimondi, or the genus [but not species or subspecies names] of a particular species), whereas all words in the title of a book are capitalized.
Box 1:

**Example:** from a funded NSF grant proposal that generally follows these guidelines:

Variable sex ratios in both insect parasitoids and their herbivorous hosts may modify population regulation and dynamics in 3-trophic level systems. Our research links two traditions in ecology: studies of 3-trophic level interactions and investigations of reproductive strategies of parasitoids. We propose that interactions between sex-ratio variation and plant preferences of the hosts and parasitoids may provide a mechanism for density-dependent regulation of herbivore populations in both time and space. In this proposal, we focus on implications of these interactions for reproductive strategies. We will extend our previous work by providing detailed estimates of the effects of plants on herbivore and parasitoid fitness and sex ratios, and by assembling these parameters into comprehensive dynamic models.

We concentrate on direct and indirect effects of plants on interactions between herbivores and parasitoids, by combining experiments on key fitness traits with population dynamic models that incorporate genetic mechanisms of parasitoid responses. Our experimental system consists of several cruciferous plants, one of their most important herbivores, the diamondback moth (*Plutella xylostella*) and its major parasitoid (*Diadegma insulare*). Our previous work indicated unexpected links between plant properties, sex ratios and dynamic interactions of herbivore and parasitoid populations.

**Paragraph 2:** general approach --- lab and field experiments.... Yadda, yadda

Our work has both basic and applied importance. The diamondback moth is a major, world-wide pest of crucifer crops. Thus, our work is immediately relevant to questions of stability in parasitoid-host dynamics and to biological control in an important system.
Box 2. Examples of guidelines from journals:

Science, (a very general, influential science journal): Use active voice when suitable, particularly when necessary for correct syntax (e.g., "To address this possibility, we constructed a \( \lambda \)Zap library . . .,” not "To address this possibility, a \( \lambda \)Zap library was constructed . . .").

Nature, (a very general, influential science journal): "Nature journals like authors to write in the active voice ('we performed the experiment...') as experience has shown that readers find concepts and results to be conveyed more clearly if written directly."

Behavioral Ecology: "The first-person active voice is preferable to the impersonal passive voice."

British Medical Journal: "Please write in a clear, direct, and active style....Write in the active [voice] and use the first person where necessary."

The Journal of Neuroscience: "Overuse of the passive voice is a common problem in writing.....in many instances it makes the manuscript dull by failing to identify the author's role in the research....Use direct, active-voice sentences."