Annotated Bibliography Assignment

As a complement to and in preparation for the group ecosystem presentation, each student will INDIVIDUALLY prepare an annotated bibliography. An annotated bibliography is a summary of a set of research articles on a given topic; the annotated bibliography can serve as a guide for others looking for resources on a given topic. Each summary, or annotation, serves as a short review of the larger paper. The content of annotations differs depending on the type of resource that is being reviewed.

Specific criteria

→ Your annotated bibliography must contain 5 different resources:
  • One literature review
  • Two peer-reviewed articles from the primary scientific literature
  • At least one of these two must have been published within the last 10 years.
  • Two resources of any type – this may include books, newspaper articles, websites, videos, etc.

→ For each resource, you must label the resource type as a ‘Literature review,’ ‘primary literature,’ or ‘other resource.’ Be sure to follow the correct criteria for each of these three types of annotations as detailed below.

→ During the Research Skills Tutorial, we learned how to use BIOSIS to search for both primary scientific research papers and literature reviews. If you would like to refresh your memory, the Bioscience librarians have compiled research guides and tutorials here: http://guides.lib.berkeley.edu/bio1bguides

→ Your final document should include a title representative of the topic/ecosystem. Name your file in the following way:

  “Section#_YourLastName_Ecosystem.doc”
  e.g., 510_Malthus_CoralReef.doc

You will submit your final document online through bCourses. Go to the ‘Assignments’ section on the left side of the front home page. Scroll down and click on the assignment: ‘L08 Ecosystems Bibliography’ and then click ‘Submit Assignment’ and follow the prompts.

Annotations by resource type

Below you will find descriptions of what to include in an annotation. Each annotation must include answers to the questions under Content and Evaluation of the resource. Notice that these questions are different for each resource type.

Literature reviews

Content: What specific topic is this review covering? What were the major summarized results?
Evaluation: How is this paper relevant to your ecosystem? How useful is this paper for understanding your particular ecosystem as a whole?
Example (boreal forest ecosystem)

Resource 1: Literature Review


The native peoples of Canada have been utilizing the plants of the boreal forest to meet their health care needs for thousands of years. This paper reviews all of the recorded medicinal plant taxa, as well as their uses by the different native groups. The authors compiled a total of 546 medicinal plant taxa, used to treat 28 different medical issues. These taxa were concentrated among reports from the eastern and central boreal forest regions, with far fewer data coming from the peoples of the western region. A major shortcoming of this review, however, is that it relies solely on published reports. As the authors themselves note, many native peoples are hesitant to share their expertise with outsiders due to concerns about pharmaceutical companies seeking to exploit their knowledge for financial gain. Thus, there are likely many additional plant taxa with potential medical utility. Developing a sustainable harvesting program for medicinal plants could potentially provide a livelihood for many native peoples, and thus create a stable alternative against boreal forest lands being taken for development or large-scale natural resource exploitation (mining, logging, etc).

Primary literature

Content: What was the hypothesis being tested? What methods were used? What were the specific results of this study?
Evaluation: How relevant is this paper for understanding the ecosystem as a whole?

Example (oak woodlands ecosystem)

Resource 2: Primary Literature


Gypsy moths (Lymantria dispar) are one of the most devastating pests in American forests and are particularly well-adapted to feeding on oak leaves. In order to figure out how to combat this threat to oak woodlands, it is critical for us to understand the factors that can affect gypsy moth success. This experiment evaluated the effect of ectomycorrhizae on herbivory of oak seedlings by the gypsy moth in different nutrient conditions. Rieske planted acorns with or without mycorrhizae in nutrient-rich or nutrient-poor soils, then measured the growth of caterpillars that fed on the resulting seedlings. Rieske found that caterpillars feeding on plants with mycorrhizae (pooled across nutrient conditions) had significantly lower relative growth rates. Nutrient condition itself did not have a significant effect on caterpillar performance. Thus, it appears that the mutualistic mycorrhizae may have another effect on plant condition besides simply increasing nutrient uptake – it has negative effects on a major oak pest.
Other Resources

Content: What types of information are provided by this resource?

Evaluation: How trustworthy is this resource (a reminder of some guidelines is below)? What does this resource provide that may be lacking in your other cited resources?

Example (Hawaiian volcanic ecosystem)

<table>
<thead>
<tr>
<th>Resource 3: Other Resource</th>
</tr>
</thead>
</table>

This website provides basic ecological information on nine forest birds which are endemic to Hawaii. Each of these species can be found within the borders of Hawai`i Volcanoes National Park. Three of these species are endangered and thus of particular conservation concern. The description of each bird species is accompanied by excellent photographs and clear recordings of the bird’s songs and calls. The range and diet are given for 8 of the species, which is helpful for understanding their ecological niches and to aid in locating these species within the park. The photographs with corresponding audio recordings serve as an alternative or supplementary identification tool to traditional field guides. As the site is actively maintained, it may also be more up-to-date than published materials. The site also contains links to photo/audio galleries for all bird species (native and introduced) that are found in specific, easily accessible areas of the park. While there is no credited text author or literature citations, this website is published by the National Park Service, which is a reputable government agency.

How trustworthy is a resource?

During the Research Skills Tutorial, we learned it is critically important to be able to determine whether or not a resource is trustworthy. For reference, the Bioscience librarians have compiled a wealth of information to help you evaluate web resources here:

http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Evaluate.html

In addition, here is a concise set of guidelines from the Columbia University libraries:

http://library.columbia.edu/locations/undergraduate/evaluating_web.html

How to format citations for your bibliography

We will use the format used in the journal Bioscience, summarized below. For more detail visit:


Journal article

Include the author(s), year, title of the article (with only the first word and proper nouns capitalized), name and volume of the journal, and pages for the article.


Internet Sources
Include the author(s), year last updated, title of the page, title of the complete work or site (if applicable), most recent date of visit, and website URL or address (no “http://” unless the web page address does not include “www”). (The method for citing online sources has not yet been standardized).


*Note: Do not write out a website address as a parenthetic citation within the text. Whenever possible list the author. If you cannot find an author, list the organization that provided the information. If you cannot find the name of the organization, question the quality of your source.

Book
Include the author(s), year, title, edition number (if it is not the first edition), and publisher.


Chapter in a Book
Include the author(s), year, chapter title, pages included within the chapter, editor(s), book title, edition number (if it is not the first edition), and publisher.

**Grading Rubrics:**

**Review paper (20 units each)**

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Needs work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citation formatting (2)</td>
<td>Citation correctly follows the Bioscience style guide</td>
<td>A few minor errors in citation formatting – it would still be possible to track down the source</td>
<td>Citation is in the wrong format (e.g. APA) OR contains a major error such as missing author or journal names</td>
<td>Missing citation, or multiple major errors that would make it difficult to locate that resource</td>
</tr>
<tr>
<td>Spelling/grammar (2)</td>
<td>Few to no errors in spelling, grammar, or usage</td>
<td>Some minor errors in spelling, grammar, or usage. Comprehension is not affected.</td>
<td>Multiple errors in spelling/grammar/usage that may impede easy comprehension</td>
<td>Numerous errors in spelling/grammar/usage that make comprehension difficult</td>
</tr>
<tr>
<td>Content (8)</td>
<td>The main topic of the review is clearly stated. The major results are summarized in a way that is simple, concise, and easily understandable.</td>
<td>The main topic of the review is clear. Major results are summarized, but it may not be clear how they relate to the main topic OR the results are presented vaguely without specifics.</td>
<td>The main topic is unclear OR seems to contradict the summarized results. Results are summarized but may not be easily understandable.</td>
<td>The main topic of the review is unclear. Specific results are missing OR are presented without context so they are difficult to interpret.</td>
</tr>
<tr>
<td>Evaluation (8)</td>
<td>The relevance of this paper to the selected ecosystem is clearly described. The writer concisely and specifically evaluates the strengths and/or weaknesses of this paper as a resource for understanding this ecosystem.</td>
<td>The relevance of this paper to the selected ecosystem is described. The usefulness of the paper is addressed, but may be lacking in specific details.</td>
<td>It is unclear how this paper is relevant to the chosen ecosystem OR There is little to no evaluation of whether this paper is a useful resource or not.</td>
<td>It is unclear how this paper is relevant to the chosen ecosystem AND There is little to no evaluation of whether this paper is a useful resource or not.</td>
</tr>
</tbody>
</table>
## Primary paper (20 units each)

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Needs work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Citation formatting (2)</strong></td>
<td>Citation correctly follows the Bioscience style guide</td>
<td>A few minor errors in citation formatting – it would still be possible to track down the source</td>
<td>Citation is in the wrong format (e.g. APA) OR contains a major error such as missing author or journal names</td>
<td>Missing citation, or multiple major errors that would make it difficult to locate that resource</td>
</tr>
<tr>
<td><strong>Spelling/grammar (2)</strong></td>
<td>Few to no errors in spelling, grammar, or usage</td>
<td>Some minor errors in spelling, grammar, or usage. Comprehension is not affected.</td>
<td>Multiple errors in spelling/grammar/usage that may impede easy comprehension</td>
<td>Numerous errors in spelling/grammar/usage that make comprehension difficult</td>
</tr>
<tr>
<td><strong>Content (8)</strong></td>
<td>The main hypothesis, methods, and results are clearly, concisely, and specifically described in simple enough terms to be understandable to non-experts.</td>
<td>The hypothesis, methods, and results are described, but may be lacking in specific detail OR are presented in overly technical terms.</td>
<td>The annotation is missing either the hypothesis, methods, or results.</td>
<td>The annotation is missing more than one of hypothesis/methods/results.</td>
</tr>
<tr>
<td><strong>Evaluation (8)</strong></td>
<td>The relevance of this study for the chosen ecosystem is logical and clearly described.</td>
<td>The relevance of this study to the chosen ecosystem is described, but may be lacking in detail or context.</td>
<td>There is a description of the paper’s relevance, but the reasoning is unclear or illogical.</td>
<td>It is unclear how this paper relates to the chosen ecosystem.</td>
</tr>
</tbody>
</table>
Other sources (20 units each)

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Needs work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citation formatting (2)</td>
<td>Citation correctly follows the Bioscience style guide</td>
<td>A few minor errors in citation formatting – it would still be possible to track down the source</td>
<td>Citation is in the wrong format (e.g. APA) OR contains a major error such as missing author or journal names</td>
<td>Missing citation, or multiple major errors that would make it difficult to locate that resource</td>
</tr>
<tr>
<td>Spelling/grammar (2)</td>
<td>Few to no errors in spelling, grammar, or usage</td>
<td>Some minor errors in spelling, grammar, or usage. Comprehension is not affected.</td>
<td>Multiple errors in spelling/grammar/usage that may impede easy comprehension</td>
<td>Numerous errors in spelling/grammar/usage that make comprehension difficult</td>
</tr>
<tr>
<td>Content (6)</td>
<td>The content of this resource is clearly and specifically described.</td>
<td>The content descriptions may lack some specific details.</td>
<td>Content description is vague or overly broad to the point where it is difficult to determine what it is.</td>
<td>Content is not described.</td>
</tr>
<tr>
<td>Evaluation (10)</td>
<td>The trustworthiness of the resource is evaluated based on specific criteria (either UCB or Columbia library). The writer clearly articulates why this resource was chosen – how is it relevant and what does this resource provide that the other resources do not? The content quality/usefulness is evaluated.</td>
<td>The trustworthiness of the resource is evaluated, but the criteria or the evidence may be less clearly defined. The relevance of this resource to the ecosystem is described. The content quality is evaluated with reference to specific details.</td>
<td>The trustworthiness of the resource is mentioned, but the supporting arguments may not fit the given criteria OR the criteria may be incorrectly applied. The relevance of the resource is mentioned, but not described. The content itself is evaluated, but may be lacking in specific details.</td>
<td>The trustworthiness of the resource is not evaluated OR no supporting argument is made for declaring the resource trustworthy. The relevance of the resource is questionable. There is little to no evaluation of the content itself.</td>
</tr>
</tbody>
</table>

Overall Subtotal: /100

Misidentifying or not identifying resource type (e.g., identifying a website as a review paper): -5 per incidence

Primary papers from non-peer-reviewed resources: -2 per incidence

Did not include at least 1 primary paper from the last 10 years: -5

Did not include at least 1 review and 2 primary papers: -10-20

Total: /100 Points: /15