GUIDELINES FOR PREPARING A THESIS OR PROJECT

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August, 2002
INTRODUCTION

A culminating experience is required of all Master's Degree candidates in Natural Resources at HSU. Program options within Natural Resources allow different culminating experiences as follows:

Fisheries – thesis
Forestry – thesis, project or comprehensive examination
Natural Resources Planning and Interpretation – thesis or project
Rangeland Resources and Wildland Soils - thesis or project
Watershed Management- thesis
Wastewater Utilization – thesis or project
Wildlife – thesis

A thesis is the written product of a systematic study of a significant problem. It identifies the problem, states the major assumptions, explains the significance of the undertaking, sets forth the sources for and methods of gathering information, analyzes the data and offers conclusions or recommendations. The finished product shows originality, critical and independent thinking, appropriate organization and format, and thorough and accurate documentation.

A project is a significant undertaking appropriate to a professional field. It shows originality and independent thinking, appropriate form and organization, and a rationale. It is described and summarized in a written abstract that includes the project's significance, objectives, methodology, and a conclusion or recommendation.

The purpose of a thesis or project is to communicate clearly and precisely as to what the research problem was, why and how the study was conducted, what results were obtained, and what implications follow from those results. Such scholarly writing is lean (e.g. simple declarative sentences) and precise in expression. It is clear and logical in construction, and meticulous in attention to detail. It is not a place to show one’s command of jargon and
acronyms in the field, but rather to demonstrate thorough understanding of the concepts and ideas relevant to the problem under study.

Responsibility for writing and for editing rests with the student, not with the major professor, graduate committee, or Graduate Director. If the student cannot write well and(or) cannot edit well, (s)he should take appropriate steps to learn.

In summary, the thesis or project should:

1. review the pertinent literature,
2. state clearly the problem and objectives,
3. specify the research methods used in sufficient detail that other investigators can repeat or evaluate the work,
4. discuss results and, where appropriate, relate current findings to those established by other investigators, and
5. evaluate results in an objective and critical manner.

In most fields of study, it is desirable to publish the thesis/project in a professional journal. Thus, the material should be arranged in the thesis or project such that a minimum of rewriting is necessary. Thus the thesis/project may be written to the format of a specific, peer reviewed scientific journal if permission is obtained from the Graduate Director ahead of time.

Extensive literature survey or tables of data which could be part of a thesis but would not ordinarily be published may be set off in appendices. The student and major professor should develop a clear understanding on authorship of published papers resulting from the thesis/project. The student is normally senior author and the major professor is normally junior author on publications based on thesis/project work.

Students who may receive grant funds from various agencies may be required by the agency to submit progress reports and(or) final reports. Neither of these may substitute for the thesis/project. However, data and analyses included in a final report may be suitable for inclusion in the thesis/project.
A thesis or project conducted jointly by two students is not allowed because it is impossible to determine the relative contributions of the two authors. Likewise, a student may not turn in the same or similar theses or projects to meet requirements of two separate degree programs.

RESPONSIBILITIES

The student’s minimum responsibilities for the thesis/project are to:

1. Work closely with the major professor and consult with other members of the graduate committee as needed. Periodically, the student must advise the major professor and committee of progress, especially if any changes are contemplated in research or writing.

2. Organize and present content accurately, and in a readable manner.

3. Compose in clear and correct form. This includes good organization, as well as correct sentence structure, paragraphing, punctuation, and spelling.

4. Be attentive to correct form and accuracy of quotations, literature citations, tables, and other illustrative materials.

5. Ensure that thesis or project materials meet the requirements of the Natural Resources graduate program and Humboldt State University. Each thesis or project should be an original contribution to science. Plagiarizing all or part of a thesis or project will make the entire document unacceptable.

6. Check all copy for errors, including Literature Cited (References).

7. Make all corrections as suggested by the graduate committee and Graduate Director.

Although the primary responsibility for the thesis/project lies with the student, the student should work closely with the major professor. The major professor should advise the student as to improvements in organization, form, content, and expression of material. And the major
professor should resolve any disagreements between committee members. By signing the title page, the major professor certifies that a) the document is well-written, b) it is an accurate description of the work performed, c) it is an original and worthwhile contribution by the student, and d) suggestions made by the graduate committee are incorporated into the final thesis draft.

The graduate committee has the responsibility to critically evaluate the manuscript and to suggest corrections or improvements as necessary. By signing the title page, the committee certifies that they have indeed done this and that the student has made the recommended corrections or improvements.

The Graduate Director for Natural Resources signs the thesis to certify that the work meets the standards of the College of Natural Resources and Sciences. As such, the completed project should be well written, in proper format and be a modest contribution to science.

The quality of work in the thesis or project is the main consideration in judging acceptability by the graduate committee and by the Graduate Director. Note that this includes the writing and format as well as the overall quality of the research.

THE REVISION PROCESS

The student should begin the literature review as soon as possible. An adequate knowledge of the literature associated with the topic under investigation is expected. A thesis/project proposal describing the proposed project should be completed as soon as possible and is required to advance to candidacy.

The student submits initial drafts of the thesis/project to the major professor. The major professor reviews each draft and makes corrections and recommendations. The student makes the suggested changes or meets with the major professor to discuss why a suggested change should not be made. Ultimately, the student provides a revised draft to the major
professor. This process continues until the major professor feels that the document is ready for the graduate committee. The major professor then submits the draft to the committee. Note that the committee reviews the thesis/project only after the major professor has approved it. Again, several drafts may be provided to the committee. When each committee member is satisfied and willing to sign the document, the major professor (not the student) submits the thesis to the Graduate Secretary for review by the Graduate Director. The Graduate Director will review the thesis or project only after the entire graduate committee has approved it. When the Graduate Director feels that further changes are unnecessary, (s)he will ask the Graduate Secretary to prepare the signature page. Signatures include all members of the graduate committee and the Graduate Director. When these signatures have been obtained, the student may submit the approved thesis to the Dean for Research and Graduate Studies for her (his) approval and signature. On average, a thesis will require three to four drafts to the major professor, one or two drafts, to the graduate committee, and one or two drafts to the Graduate Director. The actual number will vary depending upon the quality of the document and the quality of the review.

The major professor, graduate committee members, and Graduate Director are each entitled to three weeks to read each draft. Any time constraints are solely the responsibility of the student. Note that three weeks applies only to times when faculty are available. Faculty are not obliged to read drafts during approved holidays or over the summer, although many will do so. If you plan to submit your draft during summer, do not expect a three-week turnaround time.

**FINAL DEPOSIT**

The process of submitting the thesis to the Dean for Research and Graduate Studies and for making the final deposit of the approved copies is discussed in the Handbook for Master's Students.
STYLE

Style deals with certain matters of form in preparing a manuscript. The central purposes of style requirements are to produce physical consistency, precision, and clarity in the document. These qualities facilitate reading and understanding. Their absence often results in frustration, misunderstanding, and decreased readership. The basic requirements for the thesis or project in terms of format and style are presented in the “Handbook for Master’s Students” available from the Office of Research and Graduate Studies and in this handbook. The Council of Biological Editors (CBE) Style Manual should be consulted to answer all questions of style and format not covered by these two handbooks.

All theses or projects must conform to standard rules for grammar, spelling, punctuation, and word usage. Graduate students who are not adept at grammar, spelling, punctuation, and word usage should remedy this problem before they begin to write.

GENERAL APPEARANCE

The general appearance of the thesis or project is dealt with in detail in the Handbook to Master’s Students. This includes acceptable fonts, spacing, margins, and pagination. Scientific names may be denoted by underlining or by italics. However, underlining or italics must be applied consistently throughout a particular manuscript. The genus may be abbreviated after it first use but it must always be spelled out in its entirety when it is used as the first word in a sentence.

The left margin for all parts of a thesis or project must be 1.5 inches. The right, upper, and lower margins must be 1.0 inches. You must keep text, figures, tables, etc. within these margins. However, within these margins you have great flexibility in what you may do.
CONTENT

The thesis or project includes the following preliminary pages in this order:

1. Title page
2. Signature page
3. ABSTRACT
4. ACKNOWLEDGMENTS (optional)
5. TABLE OF CONTENTS
6. LIST OF TABLES
7. LIST OF FIGURES
8. LIST OF APPENDICES (if applicable)

The typical text sections include the following in this order (note that headings are not bolded):

1. INTRODUCTION
2. STUDY SITE (for studies carried out in the field)
3. MATERIALS AND METHODS
4. RESULTS
5. DISCUSSION
6. CONCLUSIONS AND RECOMMENDATIONS (optional)
7. LITERATURE CITED (or REFERENCES)
8. PERSONAL COMMUNICATIONS (if applicable)
9. APPENDICES

TITLE PAGE AND SIGNATURE PAGE

The title should accurately reflect the content of the thesis. Titles that attract the reader's attention are usually short and crisp. Sample Page A is an example of a Title Page for a thesis. The title page is assumed to be page "i" but it is not numbered. Thesis or project titles must be exactly the same wherever they appear. All entries on the title page must be
centered between the margins. The title may occupy up to three lines (between 1.7 and 2.5 inches from the top of the page). A one-line title should be centered on a line 2.5 inches from the top of the page (line 8). Likewise, the last line of a two- or three-line title should be centered on a line 2.5 inches from the top of the page (line 8). Double space up to properly locate the other lines of the title. Center the word “by” on a line 3.3 inches from the top of the page (line 13). Place the author’s name centered on a line 4.4 inches from the top of the page (line 18). Center the words “A Thesis” or “A Project” 5.3 inches from the top of the page (line 23). Double space down and center the words “Presented to” (about 5.7 inches from the top of the page, line 25). Double space down again and center the words “The Faculty of Humboldt State University” (6.1 inches from the top of the page, line 27). Center the words “In Partial Fulfillment” on a line 7.1 inches from the top of the page (line 32). Double space down and center “Of the Requirements for the Degree” (7.4 inches from top, line 34). Double space again and center “Masters of Science” (7.8 inches from top, line 36). Double space down and center “In Natural Resources: Specify your field” (8.2 inches from top, line 38). Finally, center the month and year separated by a comma on a line 9.2 inches from the top of the page (line 43).

The Graduate Secretary in Natural Resources will prepare the signature or approval page. This will be done only when a suitable draft has been received and approved by the Graduate Director.

ABSTRACT

The abstract should summarize the results and conclusions of the thesis. It should not list contents nor review methods. Literature citations and footnotes are not allowed. ABSTRACT (all caps) is centered (between the left and right margins) just inside the top margin. Double space down and center the title of the thesis or project. If
the title runs more than one line, single space between lines of the title. Double space
down from the last line of the title and center your name (first name first).

Triple space down to start the text. The page number (lower case Roman
numeral iii) is centered at the bottom of the page just inside the bottom margin. A
sample Abstract is provided in Sample Page B. Note that the primary function of the
abstract is to summarize the contents of your thesis or project. Emphasis should be on
what you found.

ACKNOWLEDGMENTS

Acknowledgments are optional unless the study has been funded.

ACKNOWLEDGMENTS (all caps) is centered (between the left and right margins) just
inside the top margin. Triple space down to start the text. The page number (iv) is
centered at the bottom of the page. Sample Page C is a sample Acknowledgments.
This is your chance to thank all the people who helped you in designing, carrying out,
and writing your project.

TABLE OF CONTENTS

The Table of Contents is normally page v. TABLE OF CONTENTS (all caps) is
centered (between the left and right margins) just inside the top margin. Triple space
down and print "Page" flush with right margin. Double space to the first heading. All
headings and subheadings are capitalized and punctuated exactly as they are in the
text. Double space between successive levels. The page number should be centered at
the bottom of the page just inside the bottom margin. If the Table of Contents is
continued to a second page, print "TABLE OF CONTENTS (CONTINUED)" flush with
the left margin just inside the upper margin. Double space to the next heading. The
page number should be centered at the bottom of the page just inside the bottom margin. A sample Table of Contents is included as Sample Page D.

LIST OF TABLES

Center LIST OF TABLES (all caps) between the left and right margins and just inside the top margin. Triple space down and print "Table" flush with left margin and "Page" flush with right margin. Double space to the first caption. All captions must be exactly as they are in the text. If a caption runs more than one line, single space between lines. Double space between captions. The page number (usually vi) is centered just inside the bottom margin. Sample Page E is a sample List of Tables.

LIST OF FIGURES

Center LIST OF FIGURES (all caps) between the left and right margins and just inside the top margin. Triple space down and print "Figure" flush with left margin and "Page" flush with right margin. Double space to the first caption. All captions must be exactly as they are in the text. If a caption runs more than one line, single space between lines. Double space between captions. The page number (usually vii) is centered just inside the bottom margin. Sample Page F is a sample List of Figures.

INTRODUCTION

The introduction should set the context for the work to be reported. It should also establish the purpose and importance of that work. It should demonstrate the author's awareness of the pertinent literature. Sample Page G explains and demonstrates format for a page of text that is the first page of a major heading. Sample Page H explains and demonstrates format for all other pages of text. Dashed lines indicate margins and centerline.
STUDY SITE

A thesis reporting on a field study may require a detailed description of the study site. Limit the information to that needed for an understanding and interpretation of the results. If only a few words are needed to locate and describe the study site, include them in the Materials and Methods.

MATERIALS AND METHODS

The Materials and Methods describe what you used (Materials) and how you did your study (Methods). This section must be sufficiently detailed so that a "reasonably competent colleague" would be able to repeat your work. Reproducibility is an essential cornerstone of the scientific method. Materials and Methods should be organized chronologically. That is, describe first what you did first. However, related methods can be described together to avoid redundancy. Be sure, however, to avoid unnecessary details about common laboratory equipment (e.g. microscopes, balances, notebooks, etc.) and procedures (e.g. standard statistical analyses). If you worked with animals or people, your IACUC or Human Subjects in Research approval number and date must be included in your Materials and Methods.

RESULTS

In the Results you present your findings. This is harder than it seems because often you are presenting data. Sometimes, data can be effectively presented in tables or figures. However, anything you present must be meaningful and should never be redundant. That is, you do not have to present every scrap of data. And you do not have to present the same data in a table, figure, and in the text. If you present the majority of data in a table, use the text to point out the highlights.
DISCUSSION

This is your chance to compare and contrast the results of your experiment or study with the previously published works of others. It also gives you a chance to present the principles, relationships, and generalizations shown by your results. You should, however, discuss not summarize your results. You should also point out any inconsistencies, exceptions, or lack of correlation in your results and offer possible explanations. Practical or theoretical implications of your work should also be noted.

CONCLUSIONS or RECOMMENDATIONS

Summary, Recommendations, or Conclusions may be included after the Discussion. However, it is not required. Recommendations might be particularly appropriate if the work has been done for a sponsoring agency to solve some problem in resource management or use.

LITERATURE CITED (REFERENCES)

There are more mistakes in the Literature Cited than in any other section of most thesis/project drafts. Proof read this section carefully. Check every citation against the original article for accuracy. Please observe the following rules in citing references and in producing the Literature Cited section of the thesis/project:

1. References cited in the body of the manuscript must be cited in the Literature Cited. Likewise, every reference cited in the Literature Cited must be used in the body of the text.

2. Cite references using the name and year system (e.g. Ruth 1934). When multiple references are cited (e.g. (Tinker 1927, Evers 1928, Chance 1929)) list
them in chronological order. If Ruth published two papers in 1934, they may be cited as Ruth (1934a) and Ruth (1934b).

3. When a paper has three or more authors, it should be cited in the body of the manuscript as Cobb et al. (1926). Note that "et al." stands for "et alia" which is Latin for and others. The et is not abbreviated so it does not get a period. The al. is abbreviated so it is followed by a period. All authors must be listed in the Literature Cited.

4. Citations in the Literature Cited (References) should follow examples provided in Sample Pages I-J. It is especially important to include a complete address for unpublished "gray" literature such as government in-house manuscripts.

5. In the Literature Cited (References) alphabetize entries by the last name of the first author. If a single author has multiple publications, list them chronologically by date of publication. If two publications appear in the same year, use Ruth (1934a) and Ruth (1934b) as mentioned previously.

6. If a senior author has multiple papers with a mixture of junior authors, alphabetize first by last name of senior author and then by last name of second author, etc. Papers with the same team of authors should be listed chronologically by date of publication.

7. You may substitute "in press" for the year if the paper has been accepted for publication but page numbers are not yet available.

Center "LITERATURE CITED" or "REFERENCES" (all caps) between the left and right margins and just inside the top margin. Triple space to your first entry. Indent the second and subsequent lines of each entry about 0.5 inches. The page number should be centered just inside the bottom margin on the first page (Sample Page I). Subsequent pages should be numbered in the upper right hand corner (sample Page J). Double space to the first reference.
APPENDICES

Appendices are used to present large amounts of repetitive data. However, the text should not rely on appendices for adequate presentation of results. Each appendix is labeled alphabetically. Type "Appendix A." followed by the legend flush left just inside the upper margin. Triple space down to begin the appendix. Capitalize only the first letter of the word Appendix. Capitalize only the first letter of the first word of the legend and any proper nouns that appear in the legend. Appendix legends are single spaced. Indent the second and all subsequent lines of the legend. Print the appendix within the usual margins. The page number should be centered just inside the bottom margin. On the second and all subsequent pages of an appendix, place the page number flush right just inside the upper margin. Triple space down and type "Appendix A. Full appendix legend as on first page of appendix (continued)." Triple space down to continue appendix. If you use appendices, a LIST OF APPENDICES should follow the LIST OF FIGURES. The List of Appendices should be to the same format as the LIST OF TABLES and LIST OF FIGURES.

Tables and figures in the appendix may be placed horizontally or vertically on the page. If the table/figure is aligned vertically, the caption must be aligned vertically.

SPECIAL TOPICS

Headings and Subheadings

Each primary heading (Introduction, Materials and Methods, etc.) should start on a new page. Primary headings should all be in caps and centered between (left and right margins) just inside the upper margin. Triple space to begin the text. Primary or other headings should not be bolded. The first page of each primary heading should be numbered at the bottom, above the one-inch bottom margin. Primary headings (other
than the Introduction) may be divided into subheadings but not at the expense of organization (Sample Page H). Secondary headings should be centered and underlined. Tertiary headings should be flush left and underlined.

Tables and Figures

Each table/figure should be placed on a separate page. Each table/figure must appear on the page immediately following the first reference to that table/figure in the text. Tables and figures must be cited in the text in numerical order. Captions are always at the top for tables and at the bottom for figures. When the table or figure is too small for the whole page, start them at the top. Tables/figures may be placed vertically on a page. When this is done the caption should also be placed vertically.

If a table is too long for one page it may be continued on the next and following pages by repeating the same caption followed by "continued" in parentheses. All column headings must be repeated exactly on each continuation page. Tables may also be printed on larger sheets of paper and then be reduced to fit within the margins.

Print the page number in the upper right corner of the page (even if the table is placed vertically). Capitalize only the first letter of the word Table. Number tables with consecutive Arabic numerals. Do not use Table 1a, 1b, etc. Capitalize only the first letter of the first word of the caption and any proper nouns that appear in the caption. Single-space captions above the table. Indent the second and all subsequent lines of the caption. Print the table within the usual margins. Leave enough space between columns so that each entry stands out as a separate item. Leave at least one space on each side of the longest entry. Align columns of words on the left; align numbers by decimal points. Single-space within items and double space between items. Footnotes may be placed two lines below the bottom of a table. Use lower case letters to identify
footnotes. Samples tables are shown on Sample Page K (horizontal) and Sample Page L (vertical).

For figures, print the page number in the upper right corner of the page (even if the figure is placed vertically). Capitalize only the first letter of the word Figure. Number figures with consecutive Arabic numerals. Do not use Figure 1a, 1b, etc. Capitalize only the first letter of the first word of the caption and any proper nouns that appear in the caption. Place the caption at the bottom of the page (above the bottom margin), flush with the left margin. Leave about 0.5 inches between the caption and the figure. Footnotes may be placed two lines below the bottom of the figure caption. Use lower case letters to identify footnotes. Sample figures are included as Sample Page M (horizontal) and Sample Page N (vertical).

**Numbers and Acronyms**

In scientific writing, one digit numbers are usually given word names (e.g. one, two, etc.). Two or more digit numbers are not (e.g. 10, 11, etc.). A fraction is always spelled out in the text unless it is part of a mixed fraction that is large enough to be expressed by numerals. Numerals are used to express quantities combined with abbreviations and symbols.

Decimals and percentages are expressed in Arabic numerals. Percent is written as one word. Note that unless it follows a number (e.g. 50%), percentage is correct. Use % only in tables and figures. For table entries with a value less than one, always precede the decimal point with a "0" (e.g. 0.24 not .24).

All reported measurements and units should be metric. Abbreviations of units should be consistent and standard. Avoid the use of periods after abbreviations (cm not cm.). Be consistent in your usage. If you use cm for centimeters, use m for meters.
Acronyms should be used only sparingly. Only well-established acronyms should be used (e.g. USDA, USFWS, USFS, etc.). An acronym is not justified simply because one name, technique, or phrase is used many times throughout the manuscript.

Quotations

Direct quotations are discouraged but allowed. Short quotations must be enclosed in quotation marks and referenced. Place the closing quotation mark outside a comma or period but inside a colon or semicolon. Place it outside or inside of an exclamation point or question mark depending upon whether the mark belongs with the quoted material or with your text. Indicate omissions of parts of quoted material by three dots (e.g. "Read my lips no new..."). Direct quotations of four typewritten lines or more should be set off in a separate paragraph(s), single-spaced, and referenced. The entire quotation should be inset equivalent to the indentation of a paragraph.

Personal Communications

If personal communications are used as references, you must provide sufficient information so that readers may verify the information reported. This may be accomplished in two ways:

1. A full mailing address for the individual providing the communication may be provided in the text each time the person is referenced. For example (personal communication, R. Smith 1990. Six Rivers National Forest, 507 F Street, Eureka, CA 95501).

2. The text may simply indicate the source of the information and on a separate page following the Literature Cited (References), complete mailing addresses for all personal communications are listed. For example, in the text you might find (Smith 1990, personal communication). Then in a separate section entitled
PERSONAL COMMUNICATIONS following the LITERATURE CITED you would find an alphabetized list of personal communications in the same format as the LITERATURE CITED (e.g. Smith, R.A. 1990. Personal Communication. Six Rivers National Forest, 507 F Street, Eureka, CA 95501).

Regardless of format, each personal communication must be referenced as such to clearly distinguish it from published references.
MYXOBOLUS SP. (MYXOSPOREA) FROM COASTRANGE SCULPIN, COTTMUS ALEUTICUS, WITH NOTES ON THE BIOLOGY OF C. ALEUTICUS AND PRICKLY SCULPIN, C. ASPER

by

Robert W. Darby

A Thesis
Presented to
The Faculty of Humboldt State University

In Partial Fullfillment
Of the Requirements for the Degree
Masters of Science
In Natural Resources: Fisheries

April, 1997
ABSTRACT

Master of Science in Natural Resources. Guidelines for Preparing a Thesis or Project

Ivanna Write Better

The abstract should summarize the results and conclusions of the thesis. Its primary emphasis should be on what you found. It should not list contents nor review methods. Literature citations and footnotes are not allowed.

ABSTRACT (all caps) is centered (between left and right margins) just inside the top margin. Double space down and center the title of the thesis or project. If the title runs more than one line, single space between lines. Double space down from the last line of the title and center your name (first name first). Triple space down to start the text. The page number (lower case Roman numeral iii) is centered at the bottom of the page.
ACKNOWLEDGEMENTS

Funding for this study was provided by a grant from the United States Forest Service. My special gratitude to Dr. Ima Forester for the help, advice, and support she gave me during the past three years and for the careful revision of thesis drafts. She suggested the original idea for this study and provided me with the opportunity to be part of the redwood forest research team at Humboldt State University. I extend special thanks to the other members of my graduate committee Drs. I. M. Leafy and I. C. Trees. They provided advice and encouragement when I most needed it. In addition, their timely reviews of thesis drafts were most appreciated. Will Helpas needed provided much valuable assistance with field work and F. Test provided valuable assistance with statistical analysis.
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<td>Distribution of tree diameters at Mexican spotted owl nest sites and at random sites in the Tularosa Mountains, New Mexico, 1991-1993</td>
<td>23</td>
</tr>
<tr>
<td>6</td>
<td>Distribution of tree diameters at Mexican spotted owl nest sites and at sites located randomly in nest stands in the Tularosa Mountains, New Mexico, 1991-1993</td>
<td>29</td>
</tr>
<tr>
<td>7</td>
<td>Distribution of tree diameters at Mexican spotted owl roost sites and at random sites in the Tularosa Mountains, New Mexico, 1991-1993</td>
<td>34</td>
</tr>
</tbody>
</table>
INTRODUCTION

Each new primary heading must start on a new page. The primary heading is centered just inside the top margin. Triple space down to begin the first line of text. The first page of each new primary heading is numbered at the bottom. The number is centered just above the bottom margin.
All pages other than the first page of a major heading are numbered in the upper right corner. The page number is just inside the top margin and just inside of the right margin (flush right). Triple space down to begin the first line of text.

Secondary Subheading

Subheadings may not be used in the Introduction. In other sections they may be used but not as a crutch for poor organization. Secondary subheadings must be upper and lower case and are centered and underlined.

Tertiary Subheadings

If you need more levels of subheadings, you should rethink your organization very carefully. Tertiary subheadings must be upper and lower case, flush left, and underlined.

Level 3 Subheading. Level 3 subheadings should be indented with the paragraph and underlined. Better yet, reorganize your manuscript.
LITERATURE CITED


Table 6. Results of forward stepwise logistic regression of habitat variables, measured at track plate stations, chosen to predict the presence of Pacific fishers on managed timberlands in Humboldt and Del Norte Counties, California.

<table>
<thead>
<tr>
<th>variable*</th>
<th>Coefficient</th>
<th>Chi-square</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1994</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevation</td>
<td>0.002</td>
<td>14.19</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Volume logs</td>
<td>0.013</td>
<td>5.37</td>
<td>0.021</td>
</tr>
<tr>
<td><strong>1995</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevation</td>
<td>0.003</td>
<td>30.22</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Basal area conifer 52cm-90cm</td>
<td>-0.008</td>
<td>3.67</td>
<td>0.055</td>
</tr>
<tr>
<td>Aspect</td>
<td>-0.144</td>
<td>2.58</td>
<td>0.108</td>
</tr>
<tr>
<td>Volume logs</td>
<td>0.011</td>
<td>2.85</td>
<td>0.092</td>
</tr>
<tr>
<td>% slope</td>
<td>-0.013</td>
<td>2.40</td>
<td>0.121</td>
</tr>
<tr>
<td>Distance to coast</td>
<td>-0.033</td>
<td>1.66</td>
<td>0.198</td>
</tr>
<tr>
<td><strong>Combined</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevation</td>
<td>0.003</td>
<td>20.29</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Volume logs</td>
<td>0.013</td>
<td>6.54</td>
<td>0.01</td>
</tr>
<tr>
<td>Basal area conifer 52cm-90cm</td>
<td>-0.008</td>
<td>3.71</td>
<td>0.054</td>
</tr>
<tr>
<td>% slope</td>
<td>-0.015</td>
<td>4.13</td>
<td>0.04</td>
</tr>
<tr>
<td>Distance to coast</td>
<td>-0.03</td>
<td>1.99</td>
<td>0.16</td>
</tr>
</tbody>
</table>

* See Table 2 for definition of variables.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Roost sites</th>
<th>Random sites in stands where owl roosted</th>
<th>Random sites in younger forests</th>
<th>n</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean*</td>
<td>Mean</td>
<td>Mean</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>Mean temperature (°C)(^b)</td>
<td>23.9(^A)</td>
<td>24.6(^{AB})</td>
<td>24.8(^B)</td>
<td>22</td>
<td>0.040</td>
</tr>
<tr>
<td></td>
<td>25.7(^A)</td>
<td>26.4(^{AB})</td>
<td>26.8(^B)</td>
<td>18</td>
<td>0.016</td>
</tr>
<tr>
<td>Temperature sum(^b)</td>
<td>10509.2</td>
<td>12442.0</td>
<td>13211.8</td>
<td>22</td>
<td>0.064</td>
</tr>
<tr>
<td></td>
<td>12844.6</td>
<td>15206.8</td>
<td>16147.7</td>
<td>18</td>
<td>0.063</td>
</tr>
</tbody>
</table>

* Means sharing the same letter within a row did not differ (P < 0.05) based on a Tukey multiple comparison test.

\(^b\) 2nd row based on data with 4 days excluded when ambient temperature below the upper critical temperature of owls.
Figure 1. Locations of survey sites (identified by site numbers), and extent of mudflats on Humboldt Bay. Water level shown is mean lower low water. Line-work is reproduced from a paper navigational map (Humboldt Bay 1993).
Figure 40. Logged weight - length relationship for coastrange sculpin, *Cottus aleuticus*, in Freshwater Creek, Humboldt County, California.