## **Symposium Proceedings Template**

The purpose of the template is to create documents/papers that will ultimately be part of the larger proceedings of the symposium. By using "style" settings already created in the template ".dot" file, we hope to minimize the General Technical Report (GTR) production time, while keeping a unified look. If there are any questions or problems, please call your proceedings technical coordinator.

**Please note**, this disclaimer will be included in the proceedings:

Papers were provided by the authors in camera-ready form for printing. Authors are responsible for the content and accuracy. Opinions expressed may not necessarily reflect the position of the U.S. Department of Agriculture.

### **Styles provided** in the template document:

STYLE NAME STYLE SPECIFICATIONS AND SAMPLE

Arial 18 pts, bold

Note: capitalize all words in title 4 letters and larger Title

Byline Arial 12 points, bold Arial 11 points, bold Abstract-Head

Abstract-Body Times New Roman 10 points, regular Times New Roman 10 points, regular Keywords Arial 14 points, bold Level 1 heading Arial 13 points, regular Level 2 heading

Level 3 heading Times New Roman 11 points, bold followed by an em dash—\* Times New Roman 11 points, regular followed by an em dash—\* Level 4 heading

Times New Roman 11 points, regular -- with indent Body text

Note: first paragraph after heading need not be indented

Footnotes-text and table Times New Roman 9 points, regular

Footnote reference Italicize numeral referencing the footnote using matching font

Table heading Times New Roman 9 points, bold Table body Times New Roman 10 points, regular References body text Times New Roman 10 points, regular

Note: apply boldface to author names and date, see sample references

Figure caption Times New Roman 10 points, regular Bullets Times New Roman 11 points, regular

- 1. On the **Tools** menu, click **AutoCorrect**, and then click the AutoFormat As You type tab.
- 2. Select the Symbol characters (--) with symbol (—) check box.
- 3. Click the **AutoFormat** tab.
- 4. Select the Symbol characters (--) with symbol (—) check box.

When you type text followed by two hyphens (--) followed by more text, Word automatically inserts an em dash (—). Do not type any spaces on either side of the hyphens. For example: "Many pines--ponderosa, for example--grow here" becomes "Many pines -- ponderosa, for example - grow here."

<sup>\*</sup> From Microsoft Office Help— "Automatically format hyphens as en dashes and em dashes"

## Title

Capitalize all main wordsincluding prepositions of four letters and more. Make sure the title matches table of contents title.

**Byline** 

#### Abstract-head

Abstract-body 200 words or less

White space included in style Head 1 and other styles - no extra return needed

#### Head 1

## Body Text

First para remove indent. Only one space after a period please, Microsoft Word takes care of space.

## Footnote-text & table

footnote reference number italicized

# Silviculture and Forest Management Under a Rapidly Changing Climate<sup>1</sup>

Carl N. Skinner.<sup>2</sup>

#### **Abstract**

Climate determines where and how forests grow. Particularly in the west, precipitation patterns regulate forest growth rates. Wet years promote "boom" vegetative conditions, while drought years promote "bust." Are managers safe in assuming that tomorrow's climate will mimic that of the last several decades? For the last ~100 to ~150 years, climate has been warming at what appears to be an unusually rapid rate and is projected to continue into the foreseeable future. Increased temperatures are projected to lead to broad-scale alteration of storm tracks changing precipitation patterns in both seasonality and amounts. Multiple lines of paleoecological data show that such changes in the past, which were rarely as rapid, were accompanied by major reorganization of vegetation at continental scales. Exercises in modeling of possible ecological responses have shown the complexity in understanding potential responses of forests. Additionally, these exercises indicate that dramatic changes in natural disturbance processes are likely. Indeed, some believe that the responses of disturbance regimes to climate change may be emerging in the more frequent outbreaks of very large fires, widespread tree die-off across the southwest, expansive insect infestations in the Rocky Mountains, and more rapid and earlier melting of snow packs through the west. Developing both short- and long-term forest management responses will be challenging. Therefore, silviculturists must be aware of the nature of and implications of climate change in order to develop management strategies that may help to reduce adverse effects while sustaining healthy, productive forests.

Keywords: silviculture, climate change, Pinus contorta Dougl. var. latifolia Engelm.

### Introduction

The successful practice of silviculture depends on a strong understanding of the relationships of species to climate in order to manage forests to meet many of society's needs from wood products to wildlife habitat. Climate is a great controller of our environment. Climate determines where and how forests grow. The type of

<sup>.&#</sup>x27; A version of this paper was presented at the national silviculture workshop, June 6-10, 2005, Tahoe City, California.

Geographer, USDA Forest Service, Pacific Southwest Research Station, Silviculture Laboratory, 3600 Avtech Parkway, Redding, CA 96002.

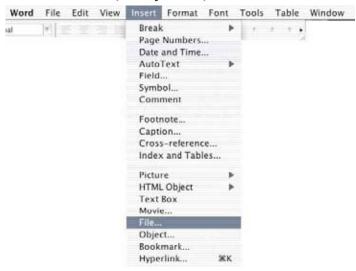
## 1. Putting your document into the template.

It is safest to start with a plain text document without any formatting. The styles are applied after they are imported into the template.

Open the template file (ProceedTemGTR.dot)

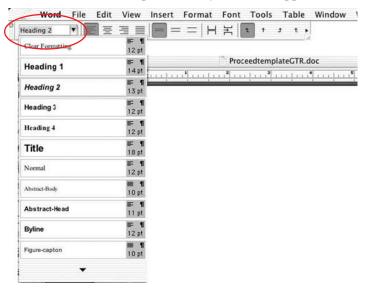
Go to menu item

Insert > File (select your file)



## 2. Styling the text

Once the text is in the template, the styles can be applied.



Select (highlight) the text to be styled and use the pull-down menu, above, or the Formatting Palette and scroll down to the appropriate style.

## 3. Inserting figures and tables.

Tables and figures can be inserted using the Insert>Picture>From File for the figures and Insert>File for the tables. Please insert the figures and tables as soon **after** first mention and as soon as the layout will allow. The preferred images types for press are TIFF (TIF) or EPS (300 dpi minimum). Note: use of em dashed in both captions.

Sample figure and caption.



Figure 1—A typical young-growth stand of



Figure 2—After thinning, the narrow crown

## Sample table and caption.

Table 2—Stand density by species and diameter class before and after thinning on the Challenge Experimental Forest, Yuba County, California

Species	Diameter class (inches)											
	3.5-4.0		4.1-8.0		8.1-12.0		12.1-16.0		16.1-20.0		Total	
	$B^a$	$A^a$	$\boldsymbol{B}$	A	$\boldsymbol{B}$	$\boldsymbol{A}$	$\boldsymbol{B}$	A	$\boldsymbol{B}$	$\boldsymbol{A}$	$\boldsymbol{B}$	A
					Nun	nber o	f trees <sub>l</sub>	oer acre	e			
Pacific madrone	8	0	66	3	28	14	5	4	0	0	107	21
Tanoak California	48	0	185	10	83	46	36	31	1	1	353	88
black oak	12	0	63	20	35	30	5	4	0	0	115	54
Total	68	0	314	33	146	90	46	39	1	1	575	163

#### 4. Save your file—and you're done!

Use the File>Save as—rename the document with the author's last name (abbreviated is OK. If mutiple files are submitted, please use additional distiguishing information, such as, Jones 001.doc or JonesMathews.doc)

These instruction pages cannot go into all of the questions that may come up. A more detailed set of guidelines can be found at:

Link to Pacific Northwest Research Station-Pacific Southwest Research Station Authors Guide January 2007.

http://www.gpoaccess.gov/stylemanual/browse.html

#### Microsoft help with tables:

http://office.microsoft.com/en-us/word/Ch100626231033.aspx

#### Microsoft help with equations:

http://ist.uwaterloo.ca/ec/equations.html

## Samples of new and old styles (quick reference for PSW scientist):

**Headings:** Level 2, 3, and 4 heading have changed--see style list

## **Keywords:**

**old:** *Key words:* sudden oak death, USDA Forest Service, *Phytophthora ramorum* **new:** Keywords: Sudden oak death, USDA Forest Service, *Phytophthora ramorum*.

### **Capitalization:**

1. Titles: capitalize all main words including prepositions of four or more letters

**old:** Problems associated with pooling mark-recapture data prior. . .

new: Problems Associated With Pooling Mark-Recapture Data Prior . . .

2. Footnotes: caps on only first word and proper nouns

**old**: <sup>1</sup> A version of this paper was presented at the Sudden Oak Death Second Science Symposium: The State of Our Knowledge, January 18-21, 2005, Monterey, California. Use this style in text and footnote.

**new:** <sup>1</sup> A version of this paper was presented at the sudden oak death second science symposium: the state of our knowledge, January 18–21, 2005, Monterey, California.

Use this style for literature citations.

Note: use of en dash for series of dates

Correct placement of commas for footnotes: J.K. Gilles,<sup>2</sup> J. Tack,<sup>2</sup> A. Peterson Zwane<sup>2</sup>

Note to coordinator: either version is correct for footnote. Use same one throughout publication.

#### **Citations:**

**old:** Scharf, Robert F.; Roth, Lewis F. 1992. **Resistence of ponderosa pine to western dwarf mistletoe in central Oregon**, Res. Paper PSW-RP-207. Albany, CA: Pacific Southwest Research Station, USDA Forest Service; 9 p.

Bates, J. 1998. **Small mammal and bird inventories.** In: Leavengood, S.; Swan, L., eds. Proceedings, western juniper forum 1997. Gen. Tech. Rep. PNW-GTR-432. Portland, OR: Pacific Northwest Research Station, USDA Forest Service; 29-30.

**new:** Scharf, Robert F.; Roth, Lewis F. 1992. Resistence of ponderosa pine to western dwarf mistletoe in central Oregon, Res. Pap. PSW-RP-207. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 9 p.

**Bates, J. 1998.** Small mammal and bird inventories. In: Leavengood, S.; Swan, L., eds. Proceedings, western juniper forum 1997. Gen. Tech. Rep. PNW-GTR-432. Portland, OR: U.S. Department of Agriculture, Forest Servce, Pacific Northwest Research Station: 29–30.

Figure and table captions: styles have changed, see style list

**old:** references *fig. 5, table 10* **new:** references fig. 5, table 10

**Frequently used and simple citations** (excerpt from the Pacific Northwest Research Station/Pacific Southwest Research Station Authors Guide, January 2007).

Journal (text reference: Mills and others 1998 or Mills et al. 1998)

Mills, T.J.; Everest, F.J.; Janik, P. [and others]. 1998. Science-management collaboration: lessons from the revision of the Tongass National Forest plan. Western Journal of Applied Forestry. 13(3): 90–96.

#### Proceedings, entire (text reference: Leavengood and Swan 1998)

**Leavengood, S.; Swan, L., eds. 1998.** Proceedings, western juniper forum 1997. Gen. Tech. Rep. PNW-GTR-432. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 97 p.

#### Proceedings, paper in (text reference: Bates 1998)

**Bates, J. 1998.** Small mammal and bird inventories. In: Leavengood, S.; Swan, L., eds. Proceedings, western juniper forum '97. Gen. Tech. Rep. PNW-GTR-432. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 29–30.

#### Station publication (text reference: Franklin and Dyrness 1973, Sohngen and Haynes 1994)

**Franklin, J.F.; Dyrness, T.C. 1973.** Natural vegetation of Oregon and Washington. Gen. Tech. Rep. PNW-8. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 417 p.

**Sohngen, B.L.; Haynes, R.W. 1994.** The "great" price spike of 1993: an analysis of lumber and stumpage prices in the Pacific Northwest. Res. Pap. PNW-RP-476. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 20 p.

#### FEMAT report (text reference: FEMAT 1993)

Forest Ecosystem Management Assessment Team [FEMAT]. 1993. Forest ecosystem management: an ecological, economic, and social assessment. Portland, OR: U.S. Department of Agriculture; U.S. Department of the Interior [and others]. [Irregular pagination].

• The correct name is Department of the Interior.

ROD and standards and guidelines (also example of corporate author; text reference: USDA and USDI 1994)
U.S. Department of Agriculture, Forest Service; U.S. Department of the Interior, Bureau of Land
Management [USDA and USDI]. 1994. Record of decision for amendments to Forest Service and Bureau
of Land Management planning documents within the range of the northern spotted owl. [Place of publication unknown]. 74 p. [plus attachment A: standards and guidelines].