

A BIBLIOGRAPHIC DATABASE FOR THE WESTERN SNOW CONFERENCE

by

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ABSTRACT

The Western Snow Conference bibliographic database contains the titles, complete citations and abstracts, where available, for all articles published in the WSC proceedings since its inception in 1933. Articles may be searched by author, title, or subject keyword. Selected articles can be marked for transfer to files for later inclusion in popular word processing programs (such as MS Word™, Word Perfect™) or to a printer.

The database requires Microsoft Windows 3.0™ or later to run. It should also run under IBM OS/2™ ver 2.1, Windows NT™ ver 3.1, or Windows 95™. The database contains a runtime version of all software necessary to run it and it has been given to the Western Snow Conference for free distribution to the membership except for media, mailing and handling costs.

INTRODUCTION

The Western Snow Conference (WSC) bibliographic database is a collection of the citations, abstracts and subject/keywords for all articles that have been presented at the annual Western Snow Conferences and published in the proceedings. Our purpose in preparing this bibliography is to provide easy access to the more than 1000 articles that have been presented and published since the inception of the WSC in 1933.

The database is designed for use on an IBM™ compatible personal computer operating under Microsoft Windows™ 3.0 or later. The actual database is programmed in Microsoft ACCESS™. The database is furnished with a run-time version of ACCESS™ and will be available from the Western Snow Conference free of charge except for the cost of disks and mailing.

A bibliography of all citations up to the end of 1973 was prepared earlier for the WSC (Washicek, Leaf, and Davis 1974). To the best of our knowledge, this 1974 publication is the latest available in written form.

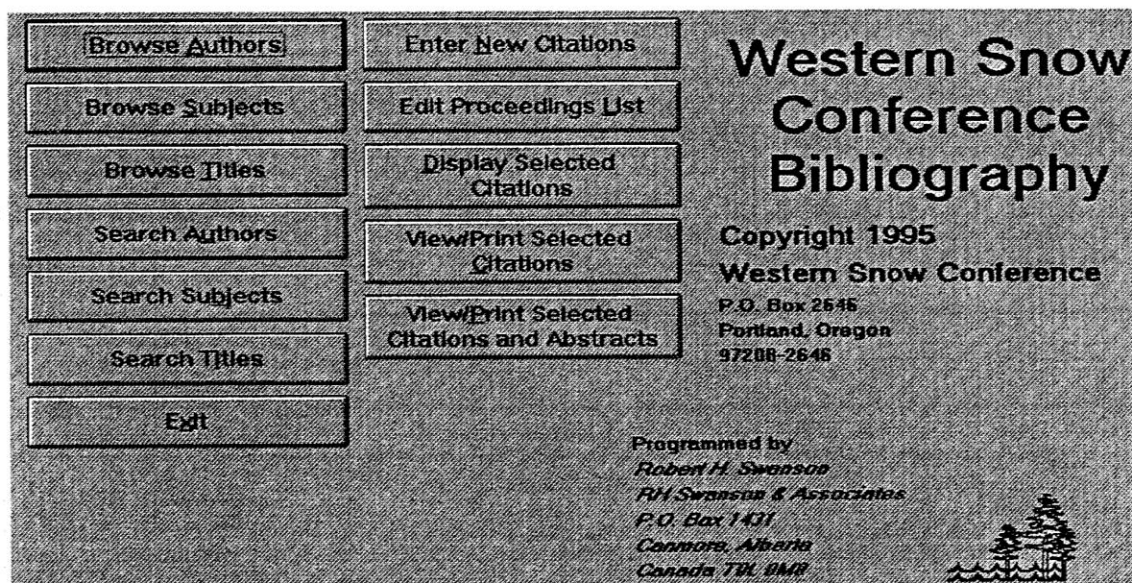


Figure 1. Main screen of WSC bibliographic database. All selections are made by clicking the desired activity with the left mouse key, or by pressing the "alt" key plus that of the underlined letter.

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DESCRIPTION OF THE DATABASE

Most computer databases are arranged with the data in *fields* where each field represents a particular type of information, e.g. the author field contains author names, the title field contains titles, etc. The collection of all of the fields that contain all of the information for one article is called a *record*. Records are further organized into *tables* that contain records of one particular type.

**Browse Authors** Display Selected Items Go To Main

Toggle Selected Yes/No No

Cheng, J.D.	Athr 1 of 1
Childreth, R.W.	Athr 2 of 3
Childreth, R.W.	Athr 2 of 2
Christian, Francis G.	Athr 1 of 1
Christner, J.	Athr 1 of 2
Christner, J.	Athr 1 of 1
<b>Church, J.E.</b>	<b>Athr 1 of 1</b>
Church, J.E.	Athr 2 of 2
Church, J.E.	Athr 1 of 1
Church, J.E.	Athr 1 of 1
Church, J.E.	Athr 1 of 2
Church, J.E.	Athr 1 of 1
Church, J.E.	Athr 1 of 1
Church, J.E.	Athr 1 of 1
Church, J.E.	Athr 2 of 2
Church, J.E.	Athr 1 of 2

**Title** The biography of snow surveying

**Where Published** WSC Serial Num 0001-33

Pages 9-12 in: Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, Feb. 18, 1933, Reno.

**Abstract**

A biography of previous attempts at snow surveying for the purpose of forecasting the snow-melt runoff in Europe, Easter United States and the Western States is related. The need for knowledge of the yearly varying quantity of water in the snow-pack which furnishes varying volumes of stream flow to lakes and reservoirs for irrigation and power development is paramount to semi-arid agriculture in the Western States, is presented. The staunch support of the Nevada Agricultural Experiment Station in starting the initial phase of this work by the Meteorologic Observatory on Mt. Rose, Nevada, at 10,800 feet elev., and including snow survey measurements of water content to correlate with streamflow and lake rise at Tahoe is described. The rapid growth and acceptance of forecast

**Author's organization of presentation**  
Nevada Agricultural Experiment Station,  
University of Nevada, Reno, Nevada.

Figure 2. Browse author screen of WSC bibliographic database. Authors can be selected by highlighting (clicking) on a particular author or using the 'up' and 'down' arrow keys. The citation, abstract and other details are filled in as each author is selected.

In the WSC database, all of the authors are stored in an AUTHOR table, the titles and abstracts in a WSCCARD table, the subject/keywords in a SUBJECT table, the proceedings information in a PROCEEDINGS table, and the affiliation of the authors in an AFFILIATION table. The five tables are linked together by unique indices that allows the information for any particular WSC article to be displayed or printed as a complete entity. This arrangement reduces the size of the overall database by eliminating duplication or empty fields caused by multiple authors and/or subject/keywords for each article. It also allows each type of data to be accessed individually for efficient search and display of the related information.

**Browse Titles** Toggle Selected Yes/No No Display Selected Items Go To Main

Seasonal snowpack dynamics and chemistry in the Sierra Nevada (California, USA) and the Tien Shan (Xinjiang)

Seasonal storage precipitation gages

**Seasonal streamflow forecasting in the Upper Rio Grande basin by incorporating the use of SNOTEL data in the**

Selection of "best" snow course points

Sequence in variation of annual precipitation in the Western United States

Settlement pressures on roof structures

Seven years of weather modification in central and southern Utah

**Citation** WSC Serial 0842-88

Pages 58 to 69, in Proceedings, 56th. Annual Meeting, Western Snow Conference, April 19-21, 1988, Kalispell, Montana

**Abstract**

The SCS has calibrated a conceptual hydrologic computer model (SSARR) for the Rio Grande near Del Norte, Colorado, to determine if improvements to seasonal runoff estimates can be made. Since the model can be calibrated using data from a short time series, SNOTEL data from sites located in the high producing areas of the basin were used. Also, watershed relationships, such as soil moisture conditions, can be conceptually integrated to help reduce the forecast variability.

**Authors**

Perkins, T.R. Athr 1 of 1

**Affiliation of highlighted author**

USDA Soil Conservation Service,  
Portland, OR

Figure 3. Browse title screen. Titles are selected and the details of the citation displayed in the same manner as the "Browse Author" screen, Fig. 2.

Since the WSC bibliographic database is programmed in the Windows™-based ACCESS™ program, users **must** have Windows™ version 3.0 or later on their computer in order to use this database (It has been successfully operated under Windows NT™ and IBM OS/2 WARP™ also.) The WSC database can thus be used only on computers with 386SX processors or higher (486, Pentium™). A mouse is almost mandatory for any Windows™-based program to select fields and to "push" buttons (Buttons on window's screens appear to be raised. They normally have a text caption with one letter underlined (Fig. 1.). The action of "clicking" with the left mouse key "pushes" the button and it appears sunken. Pressing the "alt" key and the underlined letter on the keyboard at the same time produces the same action as "clicking" with the mouse.)

Type letter(s) to search for in "Search For Subject" box. (Example s for all subjects beginning with "s" or *s for all subjects containing an "s")	Search For Subject <b>Snowpack</b>	Clear Search Results and Search Condition	Display Selected Items
	Show Search Results		Go to Main
<b>Results of search</b>			
<b>Sel ?</b>	<b>TITLE</b>		
<input type="checkbox"/>	The transition from manual to automated systems for acquiring snow data		
<input type="checkbox"/>	No Snow pillow behavior under controlled laboratory conditions		
<input type="checkbox"/>	No Snow surveys and Mount Saint Helens		
<input type="checkbox"/>	No Eastern snowpack conditions - characteristics and significance		
<input type="checkbox"/>	No Swiss improvements of the FMCW radar for snow measurements		
<input type="checkbox"/>	No A practical test of a telemetered acoustic snow depth sensor		
<input type="checkbox"/>	No Interannual variations in snowpack in the Rocky Mountains		
<input type="checkbox"/>	No Options for harvesting timber to control snowpack accumulation		
<input type="checkbox"/>	No Measurement of snowpack wetness		
<input type="checkbox"/>	No Identifying and comparing organic carbon source areas in an alpine watershed		
<input type="checkbox"/>	No Results of 1986 snow acidity sampling in California		
<input type="checkbox"/>	No Seasonal snowpack dynamics and chemistry in the Sierra Nevada (California, USA) and the Tien Shan (Xinjiang Province)		
<input type="checkbox"/>	No Snow in mountain watersheds: Connections to climate and ecosystem health		
<input type="checkbox"/>	No Acidic deposits and snowpack chemistry at a Sierra Nevada site		
<input type="checkbox"/>	No Snowpack chemistry in south central British Columbia		
<input type="checkbox"/>	No Problems associated with the variability of southwest precipitation and seasonal snowpacks		
<input type="checkbox"/>	No Snow layer density changes		
<input type="checkbox"/>	No Seasonal snowpack dynamics and chemistry in the Sierra Nevada (California, USA) and the Tien Shan (Xinjiang Province)		
Record: 1	of 27		

Figure 4. Search for subject screen. There are two other screens similar to this, one for searching for authors, and one for searching on titles.

#### OPERATION OF THE DATABASE

Initially the user is presented with a main menu screen from which he/she can select several options (Fig. 1). The "browse" selections allow one to use the mouse, up and down arrows or page keys to browse through the various entries in the author, subject or title tables. Each of these "browse" displays also displays all of the information available for each article. One can edit or change any of the information (except that for the proceedings) in each of these displays. The "browse" screen for the author table is shown in Figure 2, the title table in Figure 3.

The "search" selections operate a little differently. On each of these three screens, an empty box is displayed in which the user can type a portion of a word or name to search for in the appropriate table. The appropriate information for each table will then be displayed in tabular form in the bottom portion of the screen (Fig. 4). The data in these tables is also editable except for the author number and number of authors field which is has been calculated for easier display.

The "enter new citations" selection allows the user to enter data from WSC proceedings produced after his/her version of the database is distributed (Fig. 5). We intend to update the data each year so that those receiving the disks will have all past and current data up to the year prior to the copyright notice on the main menu screen.

On the "browse" displays (Figs 2 and 3) there is a button to select any highlighted record. The button is placed near a box that displays either "Yes" or "No" depending upon the value in the "selected" field of the underlying table. The purpose of this selection button is to allow the database user to tag record for later output to a file or printer. A listing of all selections made can be obtained on any of the "search" or "browse" screens by selecting the "Display Selected Items" button on those forms (Fig. 6). The state of the "selected" field is shown on all of the "browse" and "search" screens in one form or another. The state of the "selected" field can be changed with the "Toggle Selected Yes/No" button on the "browse" screens or by typing :Yes" or "No" directly in the "Sel ?" field in the underlying table in the "search" screens.



Entering new data is a straightforward process on the "Data Entry" form (Fig 5). Records are saved as soon as the entry is completed in each table. A mouse is mandatory here as there is no other way to move from the "authors" field to the "subject/keyword" field with the keyboard. The affiliation of each author can be entered as a new entry or a previous one can be selected from a drop-down listing. In general, we have updated the name and addresses of an author's affiliation to his current one if we knew it. The "proceedings" information cannot be edited or entered from this form. It must be entered once for each new proceedings from the "Edit Proceedings List" form accessed from the main menu and it can be done at any time before or after entering new citations.

Last Name	First Name	No.	Title	Affiliation
Evde	George D.	1		USDA Soil Conservation Service, Logan, Utah
Houston	Clyde E.	2		USDA Soil Conservation Service, Logan, Utah
		1		

Figure 5. New data entry screen. Each entry requires a unique serial number. Up until 1993, the WSC publication committee assigned a serial number to each paper e.g. 0237-51 as above. After 1992, we used the order of the appearance of the paper in the proceedings appended to the year e.g. 1993-01, 1993-02, 1993-03...for the 1993 and 1994 proceedings.

Author Names	No. of Auth
Jones, J.E.	Athr 1 of 5
Lewis, G.A.	Athr 2 of 5
Munson, S.M.	Athr 3 of 5
Clyde, G.D.	Athr 4 of 5

Figure 6. Listing of selected citations. Each of the search or browse screens has a button to select a particular citation. Those selected can then be viewed in this screen prior to printing or saving to a file. The authors or keywords for citations in which these number more than four can be viewed by using the vertical scrolling bars in the two boxes at the bottom.

Selected citations can be printed to the screen, a user selected file or to a printer. Any printer supported by Windows™ can be used. The information in the file is in a format suitable for inclusion in a publication (Figs. 7 and 8).

Boardman, H.P. 1933. Financing snow survey programs. Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 23-25.

Boardman, H.P. 1933. Normals on the Eastern slope of the Central Sierra Nevada. Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 53-60.

Boardman, H.P. and J.E. Church. 1933. Lake Tahoe water levels. Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 29-32.

Bowie, Major E.H. 1933. Cooperative (snow surveys). Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 25-26.

Church, J.E. 1933. The biography of snow surveying. Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 9-12.

Figure 7. An example of the type of output one may obtain from the WSC bibliographic database. In this example, only the citations of the selected articles are displayed.

Lastly, ACCESS™ has a few limitations. One cannot do special formatting such as underlining, bold or italics on an individual word within a field. The entire field must be formatted for underlining, bolding or italics to appear. This same formatting is common to all records. Perhaps this limitation will be removed in new versions of ACCESS™. However, one can use foreign characters and symbols within a field. Thus if the user desires, he/she can insert some infrequently used character or combination of characters in the editable fields. The user-selected file produced can then be imported into a word processor where these special characters can be replaced with the proper formatting commands.

Boardman, H.P. 1933. Financing snow survey programs. Proceedings, 1st. Annual Meeting Western Interstate Snow Survey Conference, University of Nevada, Agricultural Experiment Station Bulletin, 1934, pp 23-25.

**Abstract:**

A round-table discussion relative to financing snow surveys was lead by the author who outlined the problems presenting themselves through limited funds from the Nevada Agricultural Experiment Station. George D. Clyde explained similar limited funds from the Utah Agricultural Experiment Station and the Parnell Fund and Agricultural County Extension Service and Water Commissioners of several Irrigation Districts were being used. However, limited finances were hampering the expansion of the program, and other limitations were for qualified manpower. Nevada State Engineer, George W. Malone expressed the great importance of snow survey data to farmers on irrigation districts, and stated his difficulty in convincing the State Legislators of the financial obligation of the State in this program.

The entire group commentated on the whole hearted cooperation and support of the U.S. Forest Service, The Park Service and U.S. Weather Bureau in furnishing data.

Figure 8. In this example of output, both the citation and the abstract have been printed.

LITERATURE CITED

Washichek, Jack N., Charles Leaf and Robert T. Davis, eds. 1974. Bibliography of the Western Snow Conference. Printed by Colorado State University, Fort Collins, Colorado. (For sale by the Western Snow Conference.)