A REFERENCE GUIDE TO THE

ADF&G SHELLFISH LITERATURE DATABASE

By

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and

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PART I

INTRODUCTION AND GENERAL INSTRUCTIONS

The Shellfish Literature Database has been compiled to catalog research literature collected by the department's marine fisheries scientist and the statewide shellfish biometrician. Cataloging literature in a bibliographic database enables shellfish staff to access the literature in a timely and efficient manner and to share area-specific and diverse holdings around the state. Shellfish managers, biometricians and biologists need quick access to shellfish literature when developing new fishery management plans, writing technical issue papers and reviewing manuscripts.

The purpose of this reference guide is to provide users with the essential tools for creating bibliographies from the Shellfish Literature Database. Keywords, journals, and species specific to this database are listed in the appendices. Users are encouraged to consult the Papyrus software manual and workbook to learn the more intricate features Papyrus has to offer.

1. DATABASE SOFTWARE

The Shellfish Literature Database has been created using Papyrus Bibliographic Systems, version 7.0.2, produced by Research Software Design in Portland, Oregon. This software is designed specifically to store bibliographic citations and related information. It sorts, groups, and retrieves citations upon request and can print bibliographies in a variety of formats. The software requires approximately 470K of free RAM memory to run the program and database files. At the time of initial distribution, the Shellfish Literature Database included over 4,500 bibliographic references and required approximately 6 megabytes of hard disk space. Individual copies of the software reside on networks in each area office where shellfish staff reside. The software license limits the number of distinct Papyrus databases to four (rather than the number of computers on which it can be used).

2. THE DATABASE STRUCTURE

The related parts of the database are maintained in separate areas within the structure of the database.

References comprise the substance of the database and contain the information normally found in bibliographic citations.

Journal titles are contained in a dictionary along with abbreviated titles for more convenient and speedy entry/retrieval.

Keywords are contained in a dictionary.

Formats are shell documents that arrange fields within a reference and a list of references from the database in a specific arrangement according to journal or user-specified conventions. Papyrus provides libraries of standard formats that may suit your needs, but the users can also define a style of his or her own. See Section 9 for more information on formats.

Information from each of these areas is drawn together to compile citation entries for bibliographies. Any combination of references can be grouped together to generate a bibliographic list according to a specified format.

3. GAINING ACCESS TO PAPYRUS

Each area's local network administrator is responsible for loading Papyrus, the Shellfish Literature Database, and subsequent upgrades to the network. See Papyrus reference manuals for installation procedures. If the Papyrus software and database will be installed directly to the hard drive of a PC rather than to a network, please note the previously listed memory requirements.

Before you attempt to use Papyrus, have your Network Administrator add you to the Papyrus user group on the network. In addition, if you are using Microsoft Windows, you will want to have the Papyrus icon installed on your desktop.

Contact the Statewide Shellfish Biometrician in Juneau with any questions about the contents of the database. Specific user questions about Papyrus may be better answered by contacting Research Software Design. Contact information is listed in the software user's manual.

PART II

ENTERING DATA

The database will grow with each new entry. Within this section are several brief guidelines to follow when adding new references to the database.

4. JOURNALS

Titles of many scientific journals covering fisheries research topics have already been added to the Journal Dictionary along with their abbreviations. Additional titles and their abbreviations can be added to the dictionary as needed.

Adding New Journal Titles to the Dictionary

From the REFERENCE OPTION menu choose JOURNALS. From the JOURNAL OPTION menu choose INPUT/EDIT. Type the full name of the journal in the space provided. Papyrus will ask if this is a new journal (yes/no response). If yes, a pop-up window will be provided to enter the following information:

- Full Journal Title: (the title you provided will appear here)
- Standard Abbreviation: (enter the abbreviation; Brief abbreviations can be included)
- Routinely Cite: Issue? (n/y) Day/Month? (n/y) Series? (n/y)

Press ENTER when completed.

If you indicate "y" (yes) in any portion of the Routinely Cite field, Papyrus will present these fields automatically in the entry format when entering any article from that particular journal.

Entering New Journal Titles While Entering References:

Occasionally, you may begin entering a new reference to the bibliographic database and find that the journal title you've entered does not match the titles in the Journal Dictionary. A pop-up window will appear that asks if this is a new journal title. Before selecting YES, check your spelling to avoid entering a misspelled title that could cause problems later. If the title is indeed new, select YES, type the title and its abbreviation in the blanks provided, and press the ENTER key.

Editing Journal Titles

If you detect a misspelled journal title or abbreviation, you can correct the error by editing the listing in the Journal Dictionary. Select JOURNAL from the main menu and choose INPUT/EDIT. At the prompt, enter the name or abbreviation as entered in the Journal Dictionary. Confirm at the prompts that this is indeed the journal you wish to change. A pop-up window will present the full journal title and abbreviation as previously entered. Make any changes you wish and select OKAY to save. Papyrus will automatically update all references using that specific journal title.

If both a misspelled journal title and a correctly spelled journal title have been entered to the Journal Dictionary, Papyrus will not allow you to edit the incorrect title so that it duplicates the correct title.

Instead of following the instructions outlined in the previous paragraph, you will need to use the Search feature to identify each reference that contains the incorrectly spelled journal title and correct them one at a time. When all selected references have been changed, delete the misspelled journal title from the Journal Dictionary.

5. KEYWORDS

The inclusion of keywords in citation references allows one to perform quick topic-focused searches of the database. Papyrus allows users to assign up to 100 keywords to each reference and to search any combination of keywords, authors, editors, year, title words, and abstract words. A hierarchical master keyword table of related terminology has been developed for use with the Shellfish Literature Database (Appendix C).

Identifying Keywords

Keywords, also known as indexing terms or descriptors, reflect the central topics of the reference and can be quickly identified throughout the document. You might find document titles helpful for determining the focus of a document, but it also helps to skim through the abstract, introduction, methods, and conclusion sections to gain more information about the document. Some documents provide a list of keywords (usually below the abstract) that you may find useful.

The Keyword Table in Appendix C was compiled separately from the Papyrus database and can be used as a reference tool as documents are entered into the database. Terms commonly used in fisheries research and management have been grouped within topics (and subtopics) and listed under topic headings. As you identify keywords from the text of the document, refer to Appendix C to determine whether the topics and terms you would like to use have already been listed—or if another keyword could be substituted.

Adding Keywords to the Keyword Dictionary

Occasionally, you may wish to add keywords directly to the Keyword Dictionary. From the REFERENCE OPTION menu, choose KEYWORDS. Select the default on the KEYWORD OPTION menu: INPUT/EDIT.

Papyrus prompts you to enter the keyword:

[Keyword Input/Edit]
Keyword:

Type your choice and press ENTER. Papyrus will ask you to confirm that your keyword is indeed new. (At this point you will want to double check your spelling. If the keyword already exists, Papyrus will prompt you that it does. Be aware that Papyrus does not recognize inadvertent duplication; i.e., singular/plural forms of a word, or misspellings.) The default response is YES. The keyword is now added. Press ESC (escape) to return to the KEYWORD OPTION menu. Press ESCAPE again to return to the REFERENCE OPTION menu.

Entering Keywords While Adding References

New keywords can be added directly to the Keyword Dictionary while entering new references by simply typing the new word in the Keyword field and pressing ENTER. Papyrus will respond by asking if this represents a new keyword. If you respond with YES, Papyrus will automatically add the new keyword to the keyword dictionary. Be sure to check for misspellings before selecting YES.

When you enter a keyword, Papyrus checks for matches in the keyword dictionary that begin with the letters you've typed. Occasionally, the keyword you enter will be the "root" of one or more keywords already identified in the Keyword Dictionary. If Papyrus locates more than one match, it will prompt you with a list of possibilities to choose from. If you don't like any of the choices, press ESCAPE. If there is only one match, Papyrus will replace your entry with its matching keyword. Sometimes Papyrus is too helpful and will expand your new keyword entry to one already recognized, (e.g., replacing "feeding" with "feeding behavior" if that is the only match found.) To avoid this replacement enter an exclamation point directly after the keyword: "FEEDING!"

You can also use the F2 key to choose from a list of alphabetized keywords. At the keyword prompt, type the first few letters of the keyword and press the F2 key. If you don't wish to use any of the keywords listed, press ESC.

Updating the Keyword Table

Although Papyrus operates as a relational database and updates various related tables and dictionaries with a single command, the Keyword Table is not a Papyrus document and must be maintained separately. The Keyword Table in Appendix C has been prepared as a Word 6.0 for Windows document.

6. ENTERING BIBLIOGRAPHIC REFERENCES

Open the database. From the REFERENCE OPTION menu, choose INPUT. (Note that this is highlighted as the default.) Press ENTER.

Papyrus allows users to enter bibliographic reference data in a variety of reference types: article, book, chapter, map, patent, thesis, quote, and other. The entry screen appears with the TYPE menu pulled down and ARTICLE chosen as the default. This may in fact be what you want to choose, but if it isn't, use the UP/DOWN ARROW keys, your mouse, or type the first letter (boldfaced) of your choice to change the reference type.

* For published journal articles use the Article entry format.

* Unpublished ADF&G reports and papers are also entered as Articles, using "Unpublished document" as the Journal title. This is bending the definition of articles somewhat, but entering them as Articles provides users more flexibility to sort and group these entries than does the Other format.

* Chapters in books and significantly distinct sections in publications are entered as Chapters.

* Theses or dissertations are entered in the Thesis entry format.

* Documents (brochures, newsletters, etc.) that have been printed and distributed without formal publication are entered as Other.

* Memos, letters, and other correspondence are not considered citable references and should not be included in this database.

Each reference in your Papyrus database is composed of many fields. Some of these fields are available regardless of reference type, while others are specific to one or more reference type. The fields provided in each reference type are either required or optional and can be designated as such by the user. You can change the default setings for each reference type by selecting PREFERENCES from the REFERENCE OPTION menu, then HIDDEN/REQUIRED from the PREFEENCES menu, and follow the prompted instructions.

Articles

The entry screen for Articles appears as follows:

Reference	**Edit**	**View**	**Type**	**ARTICLE**
Reference #	4091			
Author #1				
Year				
Title				
Journal				
Volume #				
Page(s)				
Accession No				
Location				
[Abstract]				
[Comments]				
[Keyword #1]				

The first eight field names following the reference number require data to be entered in order for the citation to be considered complete. The last three fields (noted here in brackets) are optional. Note that required field names are shown in one color and optional fields in another (you can specify the colors in PREFERENCES).

Reference #: Papyrus provides this number. Each entry is numbered consecutively as you add references to the database.

Author #1: Last name first, comma, and initials. No need to enter periods, as Papyrus will delete them in the standard entry format and journal formats will add them where appropriate.

Additional authors may be entered. Papyrus will automatically offer an optional Author #2 field.

In an attempt to prevent duplicate entries, the Papyrus software has been designed to prompt users when duplication is about to occur. If another citation has already been entered with an author's name, Papyrus will present a list of the other entry(s) and inquire whether you wish to continue adding the new entry.

Year: If the document has been published within this century, you need only enter the last two digits. Otherwise, specify the complete year.

Title: Enter the title as it appears in the article. Specific words can be italicized (scientific names), boldfaced, or altered by enclosing the word(s) in braces {}. You can control the specific effect by using a specified character immediately following the opening braces. That is,

{iCancer magister}	to italicize,
{bCancer magister}	to boldface, or
{uCancer magister}	to underline.

Journal: Type the abbreviation for the journal. If you don't remember the exact abbreviation, type the first few letters and press F2 to display a listing of closely related titles from which to choose. If Papyrus does not recognize the journal title, it will present an entry box for you to enter the journal title and abbreviation and add it to the journal listings. Once again, check your spelling to avoid inaccurate duplication.

Volume #: Enter only the volume number. Press ENTER. To enter the issue number (this field is not automatically shown), press ALT-H. Enter the issue number, press ENTER, then press ALT-H again to "hide" the other optional choices.

Page(s): Enter the page numbers on which the article occurs in the journal.

Accession Number: The Accession Number entry field is also referred to as the location code, and directs the user to the physical location where the document can be found. Each user or group of users in a local area office should establish inventory conventions suitable to their needs.

Location: For this database, the location is designated by the initials of the individual(s) holding the document.

[Abstract:] Abstracts have not been included in this database.

[Comments:] Generally, comments aren't included. Occasionally, notations are included that a user might find valuable (e.g., an article is printed in Japanese rather than English).

[Keywords:] A collective listing of keywords was developed for this database and is maintained by Papyrus. Keywords are considered optional by Papyrus (rather than required) so that citations may be considered complete without keywords. However, for search purposes, each document was reviewed and keywords selected to identify the contents of the document.

If unsure about the spelling of a keyword (or whether it's one Papyrus "knows"), enter the first few letters of the keyword and press F2. Papyrus will present a related alphabetical listing of keywords, one of which you may be looking for.

When all fields have been entered, press ALT-S to save the entry. (If you prefer using menus, pull down FILE and select SAVE.) When your entry is saved, Papyrus will present the data-entry screen with the next consecutive reference number. You can either proceed with another entry, or press ESCAPE to go back to the REFERENCE OPTION menu.

Books

Books are entered in their entirety rather than as a portion of another document. The fields for this type of entry are typical of the standard bibliographic citation for books. Those fields unique to this type of entry are noted. Optional entries are presented in brackets. Hidden optional fields (revealed by pressing ALT-H) are noted with brackets and an asterisk.

Reference #:	Same as Articles.
Author:	Same as Articles.
Year:	Same as Articles.
["Authors are Editors?]	The default is NO, but sometimes the authors of a book actually edited it and should therefore be identified as editors when the reference is printed.
Title:	Enter the title of the book.
[Edition:]	An optional field, but relevant if the book has been revised and published in two or more editions.
[Volume:]	Relevant if the book is included as part of a series.
*[Total # of volumes:]	Enter the number of volumes in the set.
*[Series Title:]	Enter the series title.
*[Place in Series:]	Enter the series number.
*[Series Editor #1:]	Enter the editor of the series.
*[Other Info:]	Enter anything else about the book that should be included in the citation.
Publisher:	Enter the name of the Publisher.

City of Publication: Enter the name of the city where the book was published.

[Total number of pages:] Enter the number of pages in the book.

Accession No.: Same as Articles.

Location: Same as Articles.

[Abstract:] Same as Articles.

[Comments:] Same as Articles.

[Keywords:] Same as Articles.

Chapters

The fields presented in the entry screen for a book chapter resemble the standard citation format for a book. Fields specific to chapters include:

Editor #1: Usually the author of the chapter is not the same person who edited the book, and many publications are compiled by more than one editor. When you enter a name to this field, another field appears for Editor #2. The fields for additional editors are optional and can be ignored.

[Pages]: Enter the page numbers on which the chapter is printed rather than the total number of pages in the book.

Maps

Only a few maps have been included in this database.

As with earlier entry types, fields for reference number, author, year, title, publisher, accession number, and location are required and are the same as for Articles and Books. In addition to those fields, map entries require one additional field:

Map series: Enter the name of the map series of which this map is a part.

Two optional fields are also provided:

[Map number:] Include the map number if available.

[Scale:] Include the scale information if available.

Patents

So far, we have not included patents in this database. If you wish to include patents, consult the Papyrus manuals for guidance.

Theses

Theses are works submitted in partial fulfillment of an academic degree, such as a Doctor of Philosophy or Master of Science. Fields specific to this type of entry include:

Degree:	Enter degree type, such as Ph.D. or M.S.
Document Type:	Usually dissertation or thesis. Dissertations are typically written for philosophy degrees and theses for master degrees. Papyrus will automatically apply these assumptions and supply these terms in this field. If incorrect, change them.
Institution & City:	Enter the name of the university or college and city where the degree was granted.
Total # pages in thesis:	Enter the total number of pages in the document.

Quotes

We have not included quotes in this database. If you wish to add quotes to your database, consult the Papyrus manuals for guidance.

Other

Citations entered as Other have entry fields for Reference #, author, year, title, accession number, location, and one unique field to describe the rest of the reference. As a result, Papyrus can do very little to make an Other fit the requirements of any particular format. Punctuation and underlining used when an Other is entered will appear unchanged when the reference is subsequently printed.

Rest of Reference:	Enter the remaining reference information here.

PART III

SEARCHING THE DATABASE

There are several ways to search the contents of the Shellfish Literature Database for specific information and to apply the information to bibliographies within your own research.

7. QUICK SEARCHES

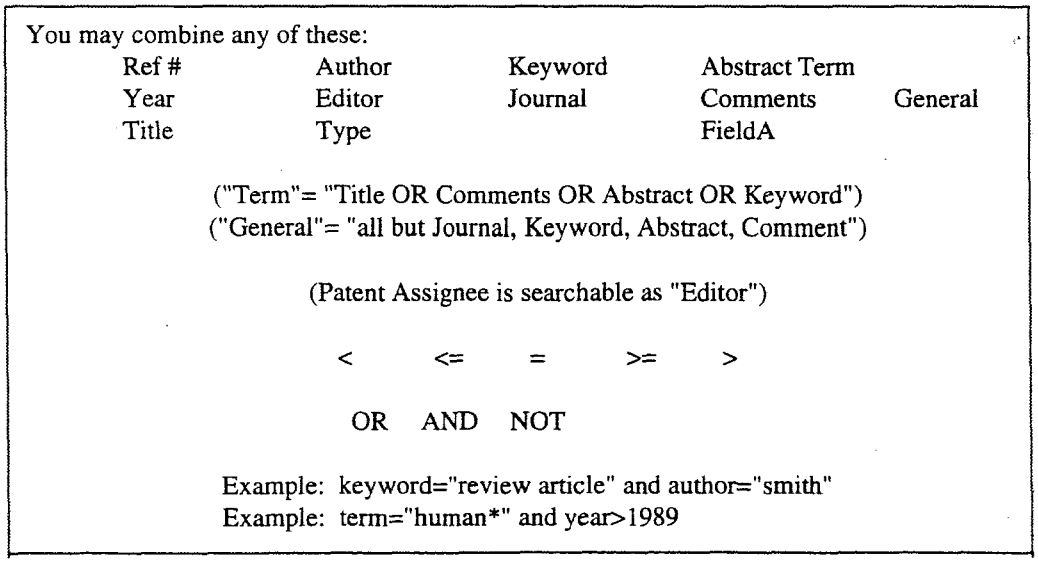
Using the EDIT option is the easiest way to locate and view a reference if you know the author's name or entry number. From the REFERENCE OPTION menu, choose EDIT. Enter the reference number or author's name (last name, first initial—or as much of it as you know), press ENTER, and a list of citations by that author will be displayed. As prompted, enter the citation number of the chosen document and press ENTER. If you wish to print the reference, use the "print screen" key on your keyboard.

Using the LIST option allows you to output a series of references in a variety of formats, and to choose where the list will be sent—to the screen, a file, or to your printer. This option is convenient when you have already conducted a search and just want to list the results, or when you want to display a numerical or alphabetical range of references. Consult the Papyrus manual for more detailed instructions.

8. SEARCHES USING CRITERIA

The SEARCH option enables you to query the database using specific information on reference fields.

From the REFERENCE OPTION menu choose SEARCH. The SEARCH menu provides a list of fields available for searching, comparison operators (the directional symbols), logical connectors (or, and, not) and a few examples for combining them in your searches. As the example at the bottom of the menu suggests, you may narrow the definition of your search by using additional operators in your search command line.



The Search Menu

As shown in the first example of the previous figure, spaces are not allowed in the search command except within multi word responses ("review article") and on either side of response connectors ("and"). Additionally, quotation marks must also be placed around multiple word responses after the equal sign. Papyrus will not proceed with your search if you don't abide by these conventions.

The second example demonstrates the use of an asterisk to denote a wildcard, and uses a combination of comparison operators (the directional symbols) and logical conectors (or, and, not) to further define the search. Using the asterisk notifies Papyrus to search through the references for all terms where "human" is the root word.

Searching for "term" rather than "keyword" may yield a longer list of references. As noted on the Search Menu, "Term"="Title OR Comments OR Abstract OR Keyword;" therefore, using "term" in your search enables Papyrus to locate the term you've chosen in more areas of each reference than in just the list of keywords. For example, using "term=reproduction" yielded 218 references, while "keyword=reproduction" yielded only 215 references.

In the following examples, you will see that using comparison operators (the directional symbols) further defines your search.

1) author=kruse and year>1990

   This search commands Papyrus to search for all references published after 1990 where Kruse is the author.

2) keyword="harvest policy" and year>=1990

   Here we're asking Papyrus to search for all references with the keyword "harvest policy" that were written during or after 1990.

3) author=murphy and term="management plan" and year<=1995

   In this search we are looking for all references written by Murphy during or before 1995 which contain the term "management plan" within the title, comments, or keyword lists. (Using "term" would also search abstracts, but we haven't included abstracts in any of the references.)

When your search is completed, you will be presented with a list of references located from the search and three options:

- ESC to discard, (i.e., PAPYRUS will discard the results).

- "V" for View/Edit. You will most likely want to look at specific information on some of the references, so press "V." Papyrus puts the results into a new Group, automatically named SEARCH.GRP, and takes you directly to that Group's VIEW/EDIT screen. Now you can choose the references of interest by using your UP/DOWN ARROW keys to move through the list. View a selected reference by pressing ENTER. The list is replaced on the screen by the complete reference with all fields. You then have the option to move up and down the list, examining each reference (UP/DOWN

ARROWS, E to Edit, D to Delete, R to Remove, C to Cite the reference or any other key to return to the full list).

- "G" for GROUP OPTIONS. Papyrus puts the results into a new Group, automatically named SEARCH.GRP, and takes you directly to its GROUP OPTIONS menu. This menu offers a number of options, many of which are self-explanatory. A few to note, however, are:

  Remove references from the group: This option will not delete the reference from the database, but will eliminate it from the group of references you've located from the database.

  Add other references to the group: This option will not permit you to add new references to the database, but will allow additional references from the database to be included in the group you've created.

  Add/remove keywords to/from all references in the group: This action allows you to alter the keyword lists for references included in this group.

Consult the Papyrus manual and workbook for more detailed guidance on working with groups.

9. BIBLIOGRAPHIC FORMATS

References are always entered without style conventions—e.g., no italics (apart from individual words), author's first name or initials entered following the surname, etc. Papyrus knows to expect data in this limited style; once it locates the data it is a relatively simple matter to rearrange it according to specific editorial preferences.

Papyrus can produce output lists of selected references in a variety of bibliographic formats. Papyrus provides two built-in formats: Standard and Brief. The Standard format is the default used by Papyrus and displays the complete reference with all of its fields. The Brief format is used when listing references; Papyrus displays the references in a one-line tabular display.

Selecting Formats From the Format Library

In addition to the built-in Standard and Brief formats, Papyrus provides numerous formats that conform to conventional bibliographic styles used by scientific journals. They are stored in a Format Library. Each format must be copied to your own format list in order to use it.

To access the Format Libraries, from the REFERENCE OPTION menu choose FORMATS, then choose LIBRARY. A form appears that already has **.FLB* entered. Press ENTER. A pop-up window appears with several format libraries to choose from. We'll sample *BIOMED.FLB* since it's at the top of the list and already highlighted. Press ENTER.

A prompt asks, "Is this the library you intended?" The default is YES. Press ENTER. A FORMAT LIBRARY OPTIONS window appears. Choose LIST LIBRARY CONTENTS. Respond to the following prompts:

- Include samples? N (Default is "no." Press ENTER.)
- On device: Screen, Printer, File (use arrow keys to choose one)

Papyrus then lists the abbreviations, descriptions, and types of formats (import, output, both, tabular output) within the *BIOMED.FLB* library. Make a note of which formats you'd like to use. When the list has been presented, Papyrus takes you back to the FORMAT LIBRARY OPTIONS menu.

To copy journal formats to your own format list, choose COPY FROM LIBRARY and press ENTER. Papyrus presents a prompt requesting format titles. Enter the abbreviation of one of the formats you wish to use (BIOMED, in this case), and press ENTER.

Department researchers may also be interested in reviewing the following selections in the Format Library:

ECOBOT.FLB	Ecology, Botany, Forestry
GEOPHYS.FLB	Geology, Physics, Chemistry
HUMAN.FLB	Humanities, Social Science

After copying formats to your own format list, you may wish confirm that the formats were indeed copied to your list. Choose FORMATS from the main menu, then choose LIST. Papyrus will lead you through prompts to define the boundaries of your search.

Start at: Beginning (ENTER);
Stop at: End (ENTER);
Include samples? N (ENTER);
On devise: Screen (ENTER).

Choosing FORMAT LIST will show the contents of your format list—that is, the formats you can use to compile a list or bibliography. Remember, you cannot use formats provided by Papyrus until you copy them to your format list.

The format list created for the Shellfish Literature Database includes a number of custom formats created for assembling bibliographies according to prescribed conventions of specific journals:

CJFAS	Canadian Journal of Fisheries and Aquatic Sciences
FB	Fisheries Bulletin
FR	Fisheries Research
JCB	Journal of Crustacean Biology
JSR	Journal of Shellfish Research
MFR	Marine Fisheries Review
TAFS	Transactions of the American Fisheries Society

Defining Your Own Output Format

You have the option of defining an output format with your own style conventions.

Select FORMATS and choose INPUT/EDIT. Papyrus prompts you to enter the format. Type your choice and press ENTER. Papyrus will ask you to confirm that your format is indeed new. Select YES. In the pop-up FORMAT INPUT/EDIT menu, the format name you specified will appear. Now you will need to specify the type and description:

Format name: MYFORMAT
Type: Indicate the type of format you will create—e.g., input, output, or both. Most often this will be Output. Use of Both is rare.
Description: Type the full description of the format name.

Press ENTER. Papyrus will ask if you want to start by copying another format. NO is the default. Press ENTER.

You will then be presented with a list of editing options:

[x] Sorting/Citations Style	[x] Map
[x] Indenting/Numbering	[ ] Patent
[x] Names/Year	[x] Thesis
[x] Article	[ ] Quote
[x] Book	[x] Other
[x] Chapter	

(Format Input/Edit) Option:

As you complete the formatting process for each option, Papyrus will place an "x" by those fields you've completed.

Sorting/Citation Style: This is where you determine whether your bibliography will be sorted in Alphabetical or Citation order, how citations will be organized, and conventions on how they will appear in the text.

Indenting/Numbering: This section allows users to specify whether citations will be numbered (sequentially, by reference number, or not at all) and how you will align indentation for each citation.

Names/Year: This is where you choose how authors names will be presented (full names vs. last name, initials, and how to organize multiple authors). Spacing and punctuation are also decisions to consider here.

Article: This section is where you determine the order of the fields within each article citation to define its appearance in your bibliography. The fields are number coded. A string of codes is compiled with parentheses and brackets to further fine-tune the format. (See Papyrus workbook for more details.)

The same process is used to format a Book, Chapter, Thesis, and Other types of entries. The code string will be distinct for each citation type. For example, defining the citation style for articles cited in ADF&G reports and publications will result in the following code string:

1. 2. 15. 16 20[19, 21[(23)] 22)][:28][(3)].

where 1 represents the author, 2 the year, 15 the title, and so on. Periods and commas and other punctuation are placed in the code string according to stylistic conventions. Papyrus uses parentheses to indicate inclusion of field information. Square-brackets are used to surround fields and punctuation that may or may not appear for any particular reference. For example, if you have directed Papyrus to include Issues and there is an Issue to be displayed, the information will appear with parentheses around it. If there isn't an Issue, then parentheses will not appear.

Consult the Papyrus manual and workbook for complete instructions on creating formats.

Importing References From Other Databases

Also included in the Format Library are formats for importing references from other databases. Within Papyrus's *IMPORT.FLB* library is the format titled *PAPX*, which is used to transfer references from one Papyrus database to another. This format will need to be used to update the Shellfish Literature Database with references from other areas and regions. To explore the possibilities of importing from other database sources, follow these procedures.

From the REFERENCE OPTION menu choose FORMAT, then choose LIBRARY. In the LOOK FOR field, type **.FLB"* and press ENTER. From the listed choices, choose IMPORT.FLB. Respond to the prompt:

- Is this the library you intended? The default is "Yes." Press ENTER.

You'll automatically be transferred to the FORMAT LIBRARY OPTIONS menu. Choose LIST LIBRARY CONTENTS, and respond to the prompts:

- Include samples? The default is "No." Press ENTER.
- On device: Screen, Printer, File. (Use arrow keys to choose one.)

The resulting list presents titles of formats for many types of databases that can be imported into your Papyrus database.

Papyrus also allows you to import references from converted files. Instead of choosing *IMPORT.FLB*, take a look at *IMPORTC.FLB*. This list reveals sources of references originally found in a particular database that have been retrieved and converted by another program.

Citing References in a Manuscript

In addition to searching the database and assembling bibliographies, Papyrus can assist you with the development of bibliographies while writing a manuscript. This process involves two steps:

a) As you write your manuscript, each time you cite a reference look it up in the database and paste a notation of the reference to be cited into your manuscript.

b) When you finish the manuscript, Papyrus scans it and creates a new version in which the notation is replaced with the appropriate citation number or "(Author, Year)" notation. As this scanning occurs, Papyrus builds a Group containing those references.

The procedures for accomplishing these two steps will depend on the environment in which you work with your word processor (DOS or Windows). Refer to the Chapter, "Prepare a Manuscript and its Bibliography Together" in the Papyrus workbook to guide you through these steps.

10. EXAMPLE SEARCHES

Included in this section are some brief examples of the various ways you can explore the contents of the Shellfish Literature Database and produce a bibliography.

Quick Search

Suppose you want to locate specific references on terminal molt but don't remember the author or other specifics. Given this is a broad initial search, you are not concerned with bibliographic or editorial style. The following process simply searches the database according to user commands and compiles the resulting citations in the Standard format by reference number.

From the main Reference Option menu, choose SEARCH.

At the SEARCH FOR prompt, type: *keyword="terminal molt"*. Papyrus will find qualifying entries and list them on the screen. At the bottom of the screen, you will see the total number of entries and choices for your next action.

Type *"G"* for group. A GROUP OPTION menu pops up and a temporary group is automatically created for searching.

Choose LIST from the GROUP OPTION menu. Papyrus offers the standard list format and asks if it is okay. Enter the default, YES

Papyrus then asks where you wish to view the list:

On Device: Screen, Printer, or File (use arrow keys to choose one).

Your choice here depends on the number of references, your preference for reading them on paper or on the screen, and whether you wish to retain the search listing for later use.

The initial distribution of the Shellfish Literature Database provided the following listing from the above search:

Group: V:\RUTHR\PAPYRUS\SEARCH.GRP
Temporary group for searching
Sorted by: Reference #
Using Format: STANDARD
Current Search: keyword="terminal molt" (Standard header at the top of a group listing.)
Last Search run on 11 Apr 1995, at 15:03
Last modified on 11 Apr 1995, at 15:03
Contains 9 references
Listing Created 11 Apr 1995, at 15:04

291. Dawe,EG; Taylor,DM; Hoenig,JM; Warren,WG; Ennis,GP; Hooper,RG; Donaldson,W; Paul,AJ; Paul,JM (1991): A critical look at the idea of terminal molt in male snow crabs (Chionoecetes opilio). CJFAS 48(11), 2266-2275.
(K-15, M-6 Terminal Molt; ghk, pcm)
[GROWTH; MATURITY; MORPHOMETRICS; SHELL CONDITION; SNOW CRAB; TERMINAL MOLT]

298. Conan,GY; Comeau,M (1986): Functional maturity and terminal molt of male snow crab, Chionoecetes opilio. CJFAS 43, 1710-1719.
(K-15, M-6 Terminal Molt; ghk)
[ATLANTIC COAST; CANADA; GROWTH; MATURITY; SNOW CRAB; TERMINAL MOLT]

304. Cormier,RJ; Fraser,AR; Bailey,RF; Raymond,N (1992): Hemolymph ecdysone concentration as a function of sexual maturity in the male snow crab (Chionoecetes opilio). CJFAS 49, 1619-1623.
(K-15, M-6 Terminal Molt; ghk, pcm)
[REPRODUCTION; SEXUAL MATURATION; SNOW CRAB; TERMINAL MOLT; WEIGHT-WIDTH RELATIONSHIPS]

305. Comeau,M; Conan,GY (1992): Morphometry and gonad maturity of male snow crab, Chionoecetes opilio. CJFAS 49, 2460-2468.
(K-15, M-6 Terminal Molt; ghk, pcm)
[GROWTH; MOLT INCREMENT; MORPHOMETRICS; REPRODUCTION; SEXUAL MATURATION; SNOW CRAB; TERMINAL MOLT]

321. Donaldson,WE; Johnson,BA (1988): Some remarks on "Functional maturity and terminal molt of male snow crab, Chionoecetes opilio" by Conan and Comeau. CJFAS 45, 1499-1503
(K-15, M-6 Terminal Molt; ghk, pcm) <<Letters and comments column; includes "Reply to Donaldson and Johnson" by Conan, Comeau, Moriyasu, and Cormier>>
[LIFE HISTORY; LITERATURE REVIEW; MATURITY; SNOW CRAB; TANNER CRAB; TERMINAL MOLT]

831. Miller,RJ; Watson,J (1976): Growth per molt and limb regeneration in the spider crab, Chionoecetes opilio. JFRBC 33, 1644-1649.
(M-1m, M-6 Terminal molt; pcm)
[AUTOTOMY; LABORATORY EXPERIMENT; MOLT CYCLE; REGENERATION; SEX/SIZE EFFECT; SNOW CRAB; TERMINAL MOLT]

1233. Lovett,DL; Felder,DL (1989): Application of regression techniques to studies of relative growth in crustaceans. JCB 9(4), 529-539.
(M-6 Models Recruitment, M-6 Terminal Molt, K-92 Growth (Length); pcm, ghk)
[GROWTH; LOG LINEAR MODEL; MORPHOMETRICS; RECRUITMENT MODELS; SHRIMP; TERMINAL MOLT]

1419. Stevens,BG; Donaldson,WE; Haaga,JA; Munk,JE (1993): Morphometry and maturity of paired Tanner crabs, Chionoecetes bairdi, from shallow- and deepwater environments. CJFAS 50(7), 1504-1516
(M-6 Terminal Molt, K-15 Reproduction; pcm, ghk)
[MATURITY; MORPHOMETRICS; REPRODUCTION; TANNER CRAB; TERMINAL MOLT]

1420. Moriyasu,M; Conan,GY; Mallet,P; Chiasson,YJ; Lacroix,H (1987): Growth at molt, molting season and mating of snow crab (Chionoecetes opilio) in relation to functional and morphometric maturity. Unpublished document. International Council for the Exploration of the Sea.
(M-6 Terminal Molt; pcm
[GROWTH; MATING; MORPHOMETRICS; SNOW CRAB; TERMINAL MOLT]

Compiling Bibliographies Using Other Formats

In this example, you want to retain all references on terminal molt in a file using the Journal of Crustacean Biology format.

From the REFERENCE OPTION menu, choose SEARCH. At the SEARCH FOR prompt, type *keyword="terminal molt"*

Papyrus will find qualifying entries and list them by reference number on the screen.

At the bottom of the screen, you will see a total number of references that contain the keywords "terminal molt." To create an output file, type *"G"* for group. The GROUP OPTIONS menu will appear. Choose LIST. Papyrus offers the Standard list format and asks if it is okay. The default isYES, but we want to substitute the Journal of Crustacean Biology, so type *JCB* and then press ENTER.

Papyrus then asks where you wish to view the list:

On Device: Screen, Printer, or File (use arrow keys to choose one).

Choose a word processing software program from the menu of file types.

Papyrus automatically enters a file name and directory. Make any necessary changes and press ENTER.

Papyrus then processes the transfer of data to the word processing file and returns you to the GROUP OPTIONS menu. Press ESC to go back to the REFERENCE OPTIONS menu. The references on terminal molt are now listed in the file you specified above according to conventions for the Journal of Crustacean Biology.

Group: V:\RUTHR\PAPYRUS\SEARCH.GRP
Temporary group for searching
Sorted by: Authors, Year, Title
Using Format: JCB
Current Search: keyword="terminal molt"
Last Search run on 11 Apr 1995, at 14:43
Last modified on 11 Apr 1995, at 14:44
Contains 9 references
Listed with Format JCB
Listing Created 11 Apr 1995, at 14:44

(This header information preceeds the reference list and can easily be deleted.)

Comeau, M., and G. Y. Conan. 1992. Morphometry and gonad maturity of male snow crab, Chionoecetes opilio.--Canadian Journal of Fisheries and Aquatic Sciences 49: 2460-2468.

Conan, G. Y., and M. Comeau. 1986. Functional maturity and terminal molt of male snow crab, Chionoecetes opilio.--Canadian Journal of Fisheries and Aquatic Sciences 43: 1710-1719.

Cormier, R. J., A. R. Fraser, R. F. Bailey, and N. Raymond. 1992. Hemolymph ecdysone concentration as a function of sexual maturity in the male snow crab (Chionoecetes opilio).--Canadian Journal of Fisheries and Aquatic Sciences 49: 1619-1623.

Dawe, E. G., D. M. Taylor, J. M. Hoenig, W. G. Warren, G. P. Ennis, R. G. Hooper, W. Donaldson, A. J. Paul, and J. M. Paul. 1991. A critical look at the idea of terminal molt in male snow crabs (Chionoecetes opilio).--Canadian Journal of Fisheries and Aquatic Sciences 48: 2266-2275.

Donaldson, W. E., and B. A. Johnson. 1988. Some remarks on "Functional maturity and terminal molt of male snow crab, Chionoecetes opilio" by Conan and Comeau.--Canadian Journal of Fisheries and Aquatic Sciences 45: 1499-1503.

Lovett, D. L., and D. L. Felder. 1989. Application of regression techniques to studies of relative growth in crustaceans.--Journal of Crustacean Biology 9: 529-539.

Miller, R. J., and J. Watson. 1976. Growth per molt and limb regeneration in the spider crab, Chionoecetes opilio.--Journal of the Fisheries Research Board of Canada 33: 1644-1649.

Moriyasu, M., G. Y. Conan, P. Mallet, Y. J. Chiasson, and H. Lacroix. 1987. Growth at molt, molting season and mating of snow crab (Chionoecetes opilio) in relation to functional and morphometric maturity. Unpublished document. International Council for the Exploration of the Sea.

Stevens, B. G., W. E. Donaldson, J. A. Haaga, and J. E. Munk. 1993. Morphometry and maturity of paired Tanner crabs, Chionoecetes bairdi, from shallow- and deepwater environments.--Canadian Journal of Fisheries and Aquatic Sciences 50: 1504-1516.

Sorting the Search Listing

The default Standard format invoked by Papyrus for listing references from a search sorts the references by ascending reference number. To specify a different sort order, proceed as in the previous two examples to place the search list in a group.

In the GROUP OPTIONS menu, select FORMAT/SORT. The default format is Standard. Specifying another format can result in a different sort order depending on the conventions adhered to by that format. Press ENTER for the Standard format.

Papyrus then queries whether you want to sort in the citation order. The default response is NO. Press ENTER to display a list of fields that can be sorted on. The default sort order presented under the list is typical of most journals: Author, year, and then title. Press ENTER and select the Ascending option to sort alphabetically by author.

Papyrus will display a progress bar indicating the number of references processed into the new group, and return you to the GROUP OPTION menu when the sorting process is completed.

V:\RUTHR\PAPYRUS\SEARCH.GRP
Temporary group for searching
Sorted by: Authors, Year, Title
Using Format: STANDARD
Current Search: keyword="terminal molt"
Last Search run on 13 Apr 1995, at 10:06
Last modified on 13 Apr 1995, at 10:09
Contains 9 references
Listing Created 13 Apr 1995, at 10:10

305. Comeau,M; Conan,GY (1992): Morphometry and gonad maturity of male snow crab, Chionoecetes opilio. CJFAS 49, 2460-2468.
(K-15, M-6 Terminal Molt; ghk, pcm)
[GROWTH; MOLT INCREMENT; MORPHOMETRICS; REPRODUCTION; SEXUAL MATURATION; SNOW CRAB; TERMINAL MOLT]

298. Conan,GY; Comeau,M (1986): Functional maturity and terminal molt of male snow crab, Chionoecetes opilio. CJFAS 43, 1710-1719.
(K-15, M-6 Terminal Molt; ghk)
[ATLANTIC COAST; CANADA; GROWTH; MATURITY; SNOW CRAB; TERMINAL MOLT]

304. Cormier,RJ; Fraser,AR; Bailey,RF; Raymond,N (1992): Hemolymph ecdysone concentration as a function of sexual maturity in the male snow crab (Chionoecetes opilio). CJFAS 49, 1619-1623.
(K-15, M-6 Terminal Molt; ghk, pcm)
[REPRODUCTION; SEXUAL MATURATION; SNOW CRAB; TERMINAL MOLT; WEIGHT-WIDTH RELATIONSHIPS]

291. Dawe,EG; Taylor,DM; Hoenig,JM; Warren,WG; Ennis,GP; Hooper,RG; Donaldson,W; Paul,AJ; Paul,JM (1991): A critical look at the idea of terminal molt in male snow crabs (Chionoecetes opilio). CJFAS 48(11), 2266-2275.
(K-15, M-6 Terminal Molt; ghk, pcm)
[GROWTH; MATURITY; MORPHOMETRICS; SHELL CONDITION; SNOW CRAB; TERMINAL MOLT]

321. Donaldson,WE; Johnson,BA (1988): Some remarks on "Functional maturity and terminal molt of male snow crab, Chionoecetes opilio" by Conan and Comeau. CJFAS 45, 1499-1503.
(K-15, M-6 Terminal Molt; ghk, pcm) <<Letters and comments column; includes "Reply to Donaldson and Johnson" by Conan, Comeau, Moriyasu, and Cormier>>
[LIFE HISTORY; LITERATURE REVIEW; MATURITY; SNOW CRAB; TANNER CRAB; TERMINAL MOLT]

1233. Lovett,DL; Felder,DL (1989): Application of regression techniques to studies of relative growth in crustaceans. JCB 9(4), 529-539.
(M-6 Models Recruitment, M-6 Terminal Molt, K-92 Growth (Length); pcm, ghk)
[GROWTH; LOG LINEAR MODEL; MORPHOMETRICS; RECRUITMENT MODELS; SHRIMP; TERMINAL MOLT]

831. Miller,RJ; Watson,J (1976): Growth per molt and limb regeneration in the spider crab, Chionoecetes opilio. JFRBC 33, 1644-1649.
(M-1m, M-6 Terminal molt; pcm)
[AUTOTOMY; LABORATORY EXPERIMENT; MOLT CYCLE; REGENERATION; SEX/SIZE EFFECT; SNOW CRAB; TERMINAL MOLT]

1420. Moriyasu,M; Conan,GY; Mallet,P; Chiasson,YJ; Lacroix,H (1987): Growth at molt, molting season and mating of snow crab (Chionoecetes opilio) in relation to functional and morphometric maturity. Unpublished document. International Council for the Exploration of the Sea.
(M-6 Terminal Molt; pcm)
[GROWTH; MATING; MORPHOMETRICS; SNOW CRAB; TERMINAL MOLT]

1419. Stevens,BG; Donaldson,WE; Haaga,JA; Munk,JE (1993): Morphometry and maturity of paired Tanner crabs, Chionoecetes bairdi, from shallow- and deepwater environments. CJFAS 50(7), 1504-1516.
(M-6 Terminal Molt, K-15 Reproduction; pcm, ghk)
[MATURITY; MORPHOMETRICS; REPRODUCTION; TANNER CRAB; TERMINAL MOLT]

PART IV

APPENDIX

APPENDIX A: Species List

COMMON NAME	SCIENTIFIC NAME
CRAB:	
red king crab	*Paralithodes camtschaticus*
blue king crab	*Paralithodes platypus*
golden king crab (brown)	*Lithodes aequispina*
southern king crab (Chile)	*Lithodes Antarticus*
southern king crab (Argentina)	*Lithodes santolla*
false king crab (Argentina, Chile)	*Paralomis granulosa*
edible crab	*Cancer pagurus*
rock crab	*Cancer irroratus*
red rock crab	*Cancer productus*
jonah crab	*Cancer borealis*
blue crab	*Callinectes sapidus*
Tanner crab	*Chionoecetes bairdi*
snow crab (Pacific)	*Chionoecetes opilio*
spider crab (Atlantic)	*Chionoecetes opilio*
spider crab (Canada, Atlantic)	*Hyas araneus*
spider crab (Germany)	*Hyas coarctatus*
stone crab	*Menippe mercenaria*
stripped shore crab	*Pachygrapsus crassipes*
hair crab (rock crab--Japan)	*Erimacrus isenbeckii*
hermit crab	*Paguristes*
green crab	*Carcinus maenas*
yellow shore crab	*Hemigrapsus oregonensis*
box crab	*Lopholithoides foraminatus*
Dungeness crab	*Cancer magister*
spanner crab	*Ranina ranina*
fiddler crab	*Uca pugilator*
velvet swimming crab	*Necora puber*
South American littoral crab	*Cyrtographsus angulatus*
coconut crab	*Birgus latro*
Pacific lyre crab	*Hyas lyratus*
lyre crab	*Hyas lyratus*
mud crab	*Rhithropanopeus harrisii*

COMMON NAME	SCIENTIFIC NAME
sand crab	*Portunus pelagicus*
Korean hair crab	*Erimacrus isenbeckii*
golden crab	*Geryon fenneri*
Scarlet king crab	*Lithodes couesi*
Grooved Tanner crab	*Chionoecetes tanneri*
Triangle Tanner crab	*Chionoecetes angulatus*
geryonid crab	*Chaceon granulatus*
ABALONE:	
abalone	*Haliotis*
red abalone	*H. rufescens*
pink abalone	*H. corrugata*
blacklip abalone	*Haliotis rubra*
black-footed abalone (New Zealand)	*H. iris*
pinto abalone	*H. kamschatkana*
greenlip abalone	*H. laevigata*
SHRIMP:	
prawn (Australia)	*Penaeus monodon*
freshwater prawn (Hawaii) (a.k.a. Malaysian prawn)	*Macrobrachium rosenbergii*
banana prawn (Australia)	*Pandalus merguiensis*
greentail prawn (Australia)	*Metanenaeus bennettae*
tiger prawn (Western Australia)	*Penaeus esculentus*
blue endeavor prawn (Australia)	*Metapenaeus endeavouri*
coonstripe shrimp	*Pandalus hypsinotus*
pink shrimp (Northern)	*Pandalus borealis*
pink shrimp	*Pandalus jordani*
white shrimp	*Pandalus setiferus*
spot shrimp	*Pandalus platyceros*
sidestripe shrimp	*Pandalus dispar*
humpy shrimp	*Pandalus goniurus*
brown shrimp	*Penaeus aztecus*

Appendix A: Species List (3 of 4)

COMMON NAME	SCIENTIFIC NAME
red giant shrimp (Italy)	*Aristaeomorpha foliacea*
blue giant shrimp	*A. antennatus*
kelp shrimp	*Eualus suckleyi*
shrimp (Arabian Gulf, Kuwait)	*Penaeus semisulcatus*
caridean shrimp	*Heterocarpus laevigatus*
deepwater shrimp (Hawaii)	*Heterocarpus ensifer*
LOBSTER:	
American lobster	*Homarus americanus*
European lobster	*Homarus gammarus*
Norwegian lobster	*Nephrops norvegicus*
spiny lobster	*Panulirus homarus*
spiny lobster (Hawaii)	*Panulirus marginatus*
Caribbean spiny lobster (Florida)	*Panulirus argus*
red rock lobster (New Zealand)	*Jasus edwardsii*
cape rock lobster (S. Africa)	*Jasus Ialandii*
slipper lobster	*Scyllarides squammosus*
rock lobster	*Panulirus cygnus*
South African rock lobster	*Jasus lalandii*
European lobster	*Homarus vulgaris*
western rock lobster	*Panulirus longipes*
ornate rock lobster (Australia)	*Panulirus* ornatus
SCALLOP:	
weathervane scallop	*Patinopecten caurinus*
pink scallop	*Chlamys rubida*
sea scallop	*Placopecten magellanicus*
spiny scallop	*Chlamys hastata*
Iceland scallop	*Chlamys islandica*
rock scallop	*Crassadoma gigantea*
saucer scallop (Western Australia)	*Amusium balloti*
tehuelche scallop (Argentina)	*Chlamys tehuelcha*
scallop (Australia)	*Pectan alba*
scallop (England)	*Pectan maximus*

Appendix A: Species List (4 of 4)

COMMON NAME	SCIENTIFIC NAME
Atlantic calico scallop	*Argopecten gibbus*
CLAM:	
Baltic clam	*Macoma balthica*
littleneck clam	*Protothaca staminea*
COMMON NAME	**SCIENTIFIC NAME**
pinkneck clam	*Spisula polynyma*
soft shelled clam (Canada)	*Mya arenaria*
OTHER:	
whelk	*Buccinum undatum*
California sea cucumber	*Parastichopus californicus*
Pacific cockle	*Cardium corbus*
Pacific sand dollar	*Dendraster excentricus*
sea urchin	*Strongylocentrotus*
green sea urchin	*Strongylocentrotus droebachiensis*
octopus	*Octopus*
American oyster	*Crassostrea virginica*
cockles (Denmark)	*Cerastoderma edule*
nudabranch	*Phestilla sibogae*

APPENDIX B: Journal List

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Acta Zoologica	(Acta Zool.)	(ACTA ZOOL)
Advances in Marine Biology	(Adv. Mar. Bio.)	(AMB)
Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Professional Paper	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Prof. Paper)	(ADFGPP)
Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, Regional Information Report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Reg. Info. Rpt.)	(ADFGRIR)
Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, unpublished report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Unpubl. Rpt.)	(ADFGUR)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Annual Management Report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Ann. Manage. Rpt.)	(ADFGAMR)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Federal Aid Report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Fed. Aid Rpt.)	(ADFGFAR)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Fishery Research Bulletin	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Fish. Res. Bull.)	(ADFGFRB)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Informational Leaflet	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Info. Leaf.)	(ADFGIL)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Special Publication	(AK. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Spec. Pub.)	(ADFGSP)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Tech. Data Rpt.)	(ADFGTDR)
Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fisheries Report	(Ak. Dept. Fish Game, Div. Comm. Fish. Manage. Dev., Tech. Fish. Rpt.)	(ADFGTFR)
Alaska Department of Fish and Game, Fisheries Rehabilitation, Enhancement and Development Division	(Ak. Dept. Fish Game, Fish. Rehab. Enhance. Dev. Div.)	(ADFGFRED)
Alaska Department of Fish and Game, unpublished memorandum	(Ak. Dept. Fish Game, Unpub. Mem.)	(ADFGUM)
Alaska Fish and Game	(AK Fish Game)	(AFG)
Alaska Fish Tales & Game Trails	(AK Fish Tales Game Trails)	(AFTGT)

Appendix B: Journal List (2 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Alaska Fishermen's Journal	(Alaska Fish J.)	(AFJ)
Alaska's Wildlife, The Magazine of the Alaska Department of Fish and Game	(AK WILDLIFE)	(AK WILDL)
American Fisheries Society Symposium	(Am. Fish Soc. Symp.)	(AFSS)
American Geophysical Union Transactions	(Am. Geophys. Union Trans.)	(AGUT)
American Journal of Agricultural Economics	(Amer. J. Agr. Econ.)	(AJAE)
American Journal of Epidemiology	(Am. J. Epidem.)	(AM J EPIDEM)
American Malacological Bulletin	(Amer. Malac. Bull.)	(AMER MALAC BULL)
The American Naturalist	(Amer. Nat.)	(AN)
American Scientist	(Am. Sci.)	(AM SCI)
American Statistician	(Am. Stat.)	(AM STAT)
American Zoologist	(Am. Zool.)	(AM ZOOL)
Ann Arbor Science Publ., University of Michigan, Ann Arbor	(Ann Arbor Sci. Publ.)	(AASP)
Annals of Mathematical Statistics	(Ann. Math. Stat.)	(AMS)
The Annals of Statistics	(Ann. Stat.)	(ANN STAT)
Annual Review of Ecological Systems	(Ann. Rev. Ecol. Syst.)	(ARES)
Annual Review of Entomology	(Ann. Rev. Entomol.)	(ARE)
Applied Statistics	(Appl. Statist.)	(APPL STAT)
Aquacultural Engineering	(Aquac. Eng.)	(AE)
Aquaculture	(Aqaculture)	(AQUAC)
Astronomy	(ASTR)	(ASTR)
Atmosphere	(Atmosphere)	(ATMOSPH)
Atmosphere-Ocean	(Atmos-Ocean)	(ATMOS-OC)
Australian Fisheries	(Aust. Fish.)	(AF)
Australian Journal of Marine and Freshwater Research	(Aust. J. Mar. Freshwater Res.)	(AJMFR)
Behavioral Ecology and Sociobiology	(Behav. Ecol. Sociobiol.)	(BES)
Biological Bulletin	(Biol. Bull.)	(BB)
Biological Oceanography	(Biol. Ocean.)	(BO)
Biological Review	(Biol. Rev.)	(BR)
Biologiya Morya	(Biol. Morya)	(BM)
Biometric Journal	(Biom. J.)	(BIOM J)
Biometrics	(Biometrics)	(BIOM)
Biometrika	(Biometrika)	(BIOMK)
BioScience	(BioScience)	(BIOS)
Bulletin of the Aquaculture Association of Canada	(Bull. Aquac. Assoc. Can.)	(BAAC)
Bulletin of the Faculty of Fisheries, Hokkaido University	(Bull. Fac. Fish. Hokkaido Univ.)	(BFFHU)
Bulletin Far Seas Fisheries Research Laboratory	(Bull. Far Seas Fish. Res. Lab.)	(BFSFRL)

Appendix B: Journal List (3 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Bulletin of the Fisheries Research Board of Canada	(Bull. Fish. Res. Board Can.)	(BFRBC)
Bulletin of the Hokkaido Regional Fisheries Research Laboratory	(Bull. Hokkaido Reg. Fish. Res. Lab.)	(BHRFRL)
Bulletin of the International North Pacific Fisheries Commission	(Bull. Int. N. Pac. Fish. Comm.)	(BINPFC)
Bulletin of the International Statistical Institute	(Bull. Int. Stat. Inst.)	(BISI)
Bulletin of the Japan Sea Regional Fisheries Research Laboratory	(Bull. Japan Sea Reg. Fish. Res. Lab.)	(BJSRFRL)
Bulletin of the Japanese Society of Fisheries Oceanography	(Bull. Japan. Soc. Fish. Ocean.)	(BJSFO)
Bulletin of the Japanese Society of Scientific Fisheries	(Bull. Jap. Soc. Sci. Fish.)	(BJSSF)
Bulletin of Marine Ecology	(Bull. Mar. Ecol.)	(BME)
Bulletin of Marine Science	(Bull. Mar. Sci.)	(BMS)
Bulletin of Mathematical Biology	(Bull. Math. Biol.)	(BMB)
Bulletin of the National Research Institute of Far Seas Fisheries	(Bull. Nat. Res. Inst. Far Seas Fish.)	(BNRIFSF)
Bulletin of the Newfoundland Government Laboratory	(Bull. Newf. Gov. Lab.)	(BNGL)
Bulletin of Tokai Regional Fisheries Research Laboratory	(Bull. Tokai Reg. Fish. Res. Lab.)	(BTRFRL)
California Cooperative Oceanic Fisheries Investigations	(Calif. Coop. Oceanic Fish. Invest.)	(CCOFI)
California Fish and Game	(Calif. Fish)	(CAL FISH)
Canada Department of Fisheries and Oceans	(Can. Dept. Fish. Oceans)	(CDFO)
The Canadian Entomologist	(Canad. Entom.)	(CANAD ENTOM)
Canadian Journal of Earth Sciences	(Can. J. Earth Sci.)	(CJES)
Canadian Journal of Fisheries and Aquatic Sciences	(Can. J. Fish. Aquat. Sci.)	(CJFAS)
Canadian Journal of Zoology	(Can. J. Zool.)	(CJZ)
Canadian Special Publication of Fisheries and Aquatic Sciences	(Can. Spec. Publ. Fish. Aquat. Sci.)	(CSPFAS)
Canadian Technical Report of Fisheries and Aquatic Sciences	(Can. Tech. Report Fish. Aquat. Sci.)	(CTRFAS)
Catch	(Catch)	(CATCH)
Chemical Engineering Progress	(Chem. Eng. Prog.)	(CEP)
Chemosphere	(Chemosphere)	(CHEMOSPH)
Chesapeake Science	(Chesapeake Sci.)	(CS)
Climate Dynamics	(Clim. Dynamics)	(CLIM DYN)
Climatic Change	(Clim. Change)	(CC)
Coastal Management	(Coastal Manage.)	(CM)
Commercial Fisheries Review	(Commer. Fish. Rev.)	(CFR)
Commercial Fishing	(Commercial Fishing)	(CF)

Appendix B: Journal List (4 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Community Statistics Theoretical Methods	(Commun. Statist.-Theor. Meth.)	(CSTM)
Comprehensive Biochemistry and Physiology	(Comp. Biochem. Phys.)	(CBP)
Continental Shelf Research	(Cont. Shelf Res.)	(CSR)
Copeia	(Copeia)	(COPEIA)
Crustaceana	(Crusaceana)	(CRUS)
Dana	(Dana)	(DANA)
Deep-Sea Research	(Deep-Sea Res.)	(DSR)
Diseases of Aquatic Organisms	(Dis. Aquat. Org.)	(DAO)
Ecological Modelling	(Ecol. Modelling)	(ECOL MOD)
Ecological Monographs	(Ecol. Monographs)	(ECOL MONOG)
Ecology	(Ecology)	(ECOL)
Environmental Biology of Fishes	(Envir. Biol. Fish.)	(EBF)
Estuaries	(Eestuaries)	(ESTU)
Estuarine and Coastal Marine Science	(Est. Coas. M.)	(ECMS)
Estuarine, Coastal and Shelf Science	(Estuarine Coastal Shelf Sci.)	(ECSS)
Evolution	(Evolution)	(EVOL)
Evolutionary Ecology	(Evol. Ecol.)	(EVOL ECOL)
Evolutionary Theory	(Evol. Theory)	(EVOL THEOR)
Fennia	(Fennia)	(FENNIA)
U.S. Fish and Wildlife Service	(US Fish Wild Svc.)	(USFWS)
Fisheries	(Fisheries)	(FISHERIES)
Fisheries Oceanography	(Fisheries Ocean.)	(FO)
Fisheries Research	(Fish. Res.)	(FR)
Fisheries Research Board of Canada	(Fish. Res. Bd. Canad.)	(FRBC)
Fisheries Research Institute, University of Washington, Seattle	(Fish. Res. Inst. Univ. Wash.)	(FRIUW)
Fishery Bulletin	(Fish. Bull.)	(FB)
Fishery Bulletin 200	(Fish. Bull. 200)	(FB200)
Fishery Market News	(Fish. Market News)	(FMN)
The Fishing Industry News Service	(Fish. Indust. News Serv.)	(FINS)
Fishing News (Books), Ltd.	(Fish. News Ltd.)	(FNL)
Fiskeridirektoratets Skrifter Serie Havundersokelser	(Fisk.)	(FISK)
Florida Scientist	(Florida Sci.)	(FLORIDA SCI)
U.N. Food and Agricultural Organization, Fisheries Report	(FAOFR)	(FAOFR)
U.N. Food and Agricultural Organization, Fisheries Technical Paper	(FAOFTP)	(FAOFTP)
Genetika	(Genetika)	(GENETIKA)
GeoJournal	(GeoJournal)	(GEOJ)
GeoTimes	(GeoTimes)	(GEOT)
Growth	(GROW)	(GROWTH)

Appendix B: Journal List (5 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Hydrobiologia	(Hydrobiol.)	(HYDROBIOL)
ICES Journal of Marine Science	(ICES J. Mar. Sci.)	(ICES JMS)
ICES Marine Science Symposium	(ICES Mar. Sci. Symp.)	(ICES MSS)
Indian Journal of Fisheries	(Indian J. Fish.)	(IJF)
Institute of Marine Science, University of Alaska	(Inst. Mar.Sci. Univ. Ak.)	(IMSUA)
Institute of Social and Economic Research, University of Alaska	(Inst. Soc. Econ. Res. Univ. Ak.)	(ISERUA)
International Council for the Exploration of the Seas	(Internat. Council Expl. Seas.)	(ICES)
International Council for North Atlantic Fisheries	(Internat. Council N. Atl. Fish.)	(ICNAF)
International Journal of Forecasting	(Int. J. Forecasting)	(INT J FOREC)
International Journal of General Systems	(Int. J. General Systems)	(IJGS)
International Journal of Invertebrate Reproduction	(Int. J. Invert. Repro.)	(IJIR)
International North Pacific Fisheries Commission	(Internat. N. Pac. Fish. Comm.)	(INPFC)
International Pacific Halibut Commission	(Internat. Pac. Halibut Comm.)	(IPHC)
International Review of Cytology	(Internat. Rev. Cytol.)	(IRC)
International Revue Der Gesamten Hydrobiologie	(Internat. Rev. Gasamten Hydro.)	(IRGH)
International-American Tropical Tuna Commission	(IATTC)	(IATTC)
Internationale Vereinigung fuer Theoretische und Angewandte Limnologie	(Int. Ver. Theor. Angew. Limnol.)	(IVTAL)
Israel Program of Scientific Translation	(Israel Prog. Sci. Transl.)	(IPST)
Journal of American Statistical Association	(J. Am. Stat. Assoc.)	(JASA)
Journal of Animal Ecology	(J. Animal Ecol.)	(JAE)
The Journal of Animal Morphology and Physiology	(J. Anim. Morph. Physiol.)	(JAMP)
Journal of Applied Ichthyology	(J. Appl. Ichthyol.)	(JAI)
Journal of Applied Meteorology	(J. Appl. Meteorol.)	(JAM)
Journal of Atmospheric Science	(J. Atmos. Sci.)	(JAS)
Journal of Basic Engineering	(J. Basic Eng.)	(JBE)
Journal of Biogeography	(J. Biogeogr.)	(JB)
Journal of the Biological Board of Canada	(J. Biol. Board Can.)	(JBBC)
Journal of Climate	(J. Clim.)	(J CLIM)
Journal du Conseil, Conseil International Pour l'Exploration de la Mer	(Cons.Cons.Int.Explor. Mer.)	(CCIEM)

Appendix B: Journal List (6 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Journal of Crustacean Biology	(J. Crustacean Biol.)	(JCB)
Journal of Ecology	(J. Ecol.)	(J ECOL)
Journal of Environmental Economics and Management	(J. Environ. Econ. Manage.)	(JEEM)
Journal of Environmental Management	(J. Environ. Manage.)	(JEM)
Journal of Experimental Botony	(J. Exper. Bot.)	(JEB)
Journal of the Experimental Marine Biological Ecology	(J. Exper. Marine Bio & Ecol.)	(JEMBE)
Journal of Experimental Zoology	(J. Exper. Zool.)	(JEZ)
Journal of Fish Biology	(J. Fish Biol.)	(JFB)
Journal of the Fisheries Research Board of Canada	(J. Fish. Res. Board Can.)	(JFRBC)
Journal of Geology	(J. Geol.)	(J GEOL)
Journal of Geophysical Research	(J. Geophys. Res.)	(JGR)
Journal of Great Lakes Research	(J. Great Lakes Res.)	(JGLR)
Journal of Ichthyology	(J. Ichthyol.)	(JI)
Journal of Invertebrate Pathology	(J. Invert. Path.)	(JIP)
Journal of the Marine Biological Association of India	(J. Mar. Biol. Assoc. (India))	(JMBAI)
Journal of Marine Biology Association of the United Kingdom	(J. Mar. Biol. Assoc. (UK))	(JMBAUK)
Journal of Marine Research	(J. Mar. Res.)	(JMR)
Journal of Marine Systems	(J. Mar. Systems)	(JMS)
Journal of Maritime Law and Commerce	(JMLC)	( )
Journal of Marketing Research Society	(J. Market Res. Soc.)	(SMRS)
Journal of Mathematical Biology	(J. Math. Biol.)	(JMB)
Journal of Multivariate Analysis	(J. Multivar. Anal.)	(JMA)
Journal of the Northwest Atlantic Fisheries Society	(J. Northwest Atl. Fish. Soc.)	(JNAFS)
Journal of the Oceanographic Society of Japan	(J. Oceanogr. Soc. Jpn.)	(JOSJ)
Journal of Physical Oceanography	(J. Phys. Oceanogr.)	(JPO)
Journal of Plankton Research	(J. Plankton Res.)	(JPR)
Journal of Protozoology	(J. Protozool.)	(JPROTOZ)
Journal of the Royal Statistical Society	(J. Roy. Statis.)	(JRSS)
Journal of Sedimentary Petrology	(J. Sediment Petrol.)	(JSP)
Journal of Shellfish Research	(J. Shellfish Res.)	(JSR)
Journal of Social Biology Structure	(J. Soc. Biol. Struct.)	(JSBS)
Journal of Statistical Computation and Simulation	(J. Stat. Comput. Simul.)	(JSCS)
Journal of Statistical Planning and Inference	(J. Statist. Plann. Inference)	(JSPI)
Journal of Theoretical Biology	(J. Theor. Biol.)	(JTB)
Journal of the Tokyo University of Fisheries	(J. Tokyo Univ. Fish.)	(JTUF)

Appendix B: Journal List (7 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Journal of Water Resources Planning and Management	(J. Water Res. Plann. Manage.)	(JWRPM)
Journal of Wildlife Management	(J. Wildl. Man.)	(JWM)
Journal of the World Aquaculture Society	(J. World Aquac. Soc.)	(JWAS)
Kontyu	(Kontyu)	(KONTYU)
Kuwait Bulletin of Marine Science	(Kuwait Bull. Mar. Sci.)	(KBMS)
Lethaia	(Lethaia)	(LETHAIA)
Limnology and Oceanography	(Limnol. Oceanogr.)	(LO)
UA Magazine	(UA Magazine)	(UA MAGAZ)
Marine Behavior and Physiology	(Mar. Behav. Physiol.)	(MBP)
Marine Biology	(Mar. Biol.)	(MB)
Marine Biology Letters	(Mar. Biol. Lett.)	(MBL)
Marine Ecology	(Mar. Ecol.)	(ME)
Marine Ecology Progress Series	(Mar. Ecol. Prog. Ser.)	(MEPS)
Marine Environmental Research	(Mar. Environ. Res.)	(MER)
Marine Fisheries Review	(Mar. Fish. Rev.)	(MFR)
Marine Policy	(Mar. Policy)	(MP)
Marine Pollution Bulletin	(Mar. Pollut. Bull.)	(MPB)
Marine Resource Economics	(Mar. Res. Econ.)	(MRE)
Marine Science Communications	(Mar. Sci. Commun.)	(MSC)
Marine Technology Society Journal	(Mar. Technol. Soc. J.)	(MTSJ)
Maritime	(Maritime)	(MARITIME)
Meeresforschung	(Meeresforschung)	(MEERESFO)
Micropaleontology	(Micropaleontolog.)	(MICROPAL)
Monthly Weather Review	(Monthly Weather Rev.)	(MWR)
Multivariate Behavioural Research	(Multivar. Behav. Research)	(MBR)
NAFO Scientific Council Studies	(NAFO Sci. Council Studies)	(NAFO)
National Fisherman	(Natl. Fisherman)	(NF)
National Geographic	(Nat. Geog.)	(NG)
National Marine Fisheries Service, Northwest and Alaska Fisheries Center, Seattle	(Nat. Mar. Fish. Svc. NWAFC.)	(NWAFC)
National Oceanic and Atmospheric Administration	(Nat. Oceanic Atmosph. Admin.)	(NOAA)
Natural History	(Nat. Hist.)	(NAT HIST)
Natural Resource Modeling	(Nat. Res. Modeling)	(NRM)
Nature	(Nature)	(NATURE)
Netherlands Journal of Sea Research	(Neth. J. Sea Res.)	(NJSR)
Netherlands Journal of Zoology	(Neth. J. Zool.)	(NJZ)
New Scientist	(New Sci.)	(NS)
New Zealand Journal of Marine and Freshwater Research	(NZ J. Mar. Freshw. Res.)	(NZJMFR)
Nippon Suisan Gakkaishi	(Nippon Suisan Gakkaishi)	(NSG)

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TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
NOAA, National Marine Fisheries Service	(NOAA, Nat. Mar. Fish. Svc.)	(NMFS)
Nor'Easter	(Nor'Easter)	(NOREASTR)
North American Journal of Fisheries Management	(NA J. Fish. Manage.)	(NAJFM)
North Pacific Fishery Management Council, Anchorage	(N. Pac. Fish. Manage. Council)	(NPFMC)
Northeast Gulf Science	(Northeast Gulf Sci.)	(NGS)
Northwest Science	(Northwest Sci.)	(NW SCI)
Oceanographic Marine Biology Annual Review	(Oceanog. Mar. Biol. Annual Rev.)	(OMBAR)
Oceanography and Marine Biology	(Oceanog. Mar. Biol.)	(OMB)
Oceanologica Acta	(Oceanol. Acta)	(OCEAN ACT)
Oceanology	(Oceanol.)	(OCEANOL)
Oecologia	(Oecologia)	(OEC)
Oikos	(Oikos)	(OIKOS)
Ophelia	(Ophelia)	(OPHELIA)
Pacific Fishery Management Council	(Pacific Fish. Manage. Council)	(PFMC)
Pacific Fishing	(Pacific Fish.)	(PAC FISH)
Pacific States Marine Fisheries Commission	(Pacific States Mar. Fish. Commiss.)	(PSMFC)
Palaeogeography, Palaeoclimatology, Palaeoecology	(Palaeogeogr. Palaeoclimatol., Palaeoecol.)	(PAL PAL)
Polar Biology	(Polar Biol.)	(POL BIOL)
Proceedings of the Biological Society of Washington	(Proc. Biol. Soc. Wash.)	(PBSW)
Proceedings of the National Academy of Science USA	(P. NAS. US.)	(PNASUS)
Proceedings of the National Shellfish Association	(Proc. Natl. Shellfish Assoc.)	(PNSA)
Proceedings Symposium on Crustacea, Part II, Marine Biology Association of India, Mandapam Camp	(. . .)	( )
Progress in Oceanography	(Prog. Oceanog.)	(PROG OCEA)
The Progressive Fish-Culturist	(Prog. Fish-C.)	(PROG F-C)
Psychological Bulletin	(Psych. Bull.)	(PSYC BULL)
Psychometrika	(Psychometri.)	(PSYCHOM)
Quarterly Journal of Applied Mathematics	(Quart. J. Appl. Math.)	(QJAM)
Quarterly Review Biology	(Quart. Rev. Biol.)	(QRB)
Rapp. P.-v. Réun. Cons. int. Explor. Mer	(RPRCEM)	(RPRCEM)

Appendix B: Journal List (9 of 9)

TITLE	STANDARD ABBREVIATION	BRIEF ABBREVIATION
Rapports et Proces-Verbaux des Réunions. Conseil International pour l'Exploration de la Mer	(Rapp. P-V. Reun. Cons. Int. Explor. Mer.)	(RPRCIEM)
Reviews in Aquatic Sciences	(Rev. Aquat. Sci.)	(RAS)
Reviews in Fisheries Science	(Rev. Fish. Sci.)	(RFS)
Reviews of Geophysics	(Rev. Geophysics)	(REV GEOPHYS)
Revue de l'Agriculture	(Rev. Agr.)	(REV AGR)
Rit Fiskideildar	(Rit Fiskideildar)	(RIT FISK)
Sarsia	(Sarsia)	(SARSIA)
Science	(Sci.)	(SCI)
Science News	(Sci. News)	(SCI NEWS)
Scientific American	(Sci. Amer.)	(SCI AMER)
Scottish Fisheries Bulletin	(Scot. Fish. Bull.)	(SFB)
Sea Technology	(Sea Tech.)	(SEA TECH)
Society for Industrial Applied Mathematics	(Soc. Indust. Appl. Math.)	(SIAM)
South African Journal of Marine Science	(S. Afr. J. Mar. Sci.)	(SAJMS)
South African Journal of Science	(S. Afr. J. Sci.)	(SAJS)
Soviet Journal of Ecology	(Soviet J. Ecol.)	(SJE)
Soviet Journal of Marine Biology	(Soviet J. Mar. Biol.)	(SJMB)
Statistics in Medicine	(Stat. Med.)	(STAT MED)
Symposium of the Zoological Society of London	(Symp. Zool. Soc. London)	(SZSL)
Systematics in Zoology	(System. Zool.)	(SZ)
Taxon	(Taxon)	(TAXON)
PC Tech Journal	(PC Tech. J.)	(PC TECH J)
Technometrics	(Technomet.)	(TECHN)
Tellus	(Tellus)	(TELLUS)
Theoretical Population Biology	(Theoret. Population Biol.)	(TPB)
Transactions. American Fisheries Society	(Tr. Am. Fish. Soc.)	(TAFS)
Transactions of the Royal Society of Canada	(Trans. Roy. Soc. Canada)	(TRSC)
UCLA-Alaska Law Review	(UCLA-Ak. Law Rev.)	(UCLA ALR)
Underwater Naturalist	(Underwater Nat.)	(U NAT)
University of Alaska, Sea Grant College Program	(Univ. Ak. Sea Grant Coll. Prog.)	(UASGCP)
University of Washington Press	(Univ. Wash. Press)	(UWP)
Unpublished Report	(Unpub. Rep.)	(UNPUB)
Washington Department of Fisheries	(Wash. Dept. Fish.)	(WDF)
Wildlife Society Bulletin	(Wildl. Soc. Bull.)	(WSB)
Zoologica Africana	(Zool. Afr.)	(ZOOL AFR)
Zoological Journal Linnean Society	(Zool. J. Linn. Soc.)	(ZJLS)

APPENDIX C. Keyword Table

*= subcolumn exists

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
DOCUMENT		
bibliography		
Board of Fisheries		
database		
fishery management plan		
literature review		
literature search		
map		
journal publication guidelines		
reporting policies		
symposium proceedings		
BIOLOGY	**Age**	
***age**	age class	
anatomy	age composition	
behavior	age distribution	
biodiversity	age length key	
cannibalism	ageing	
chelatomy	ageing error	
density dependence	age weight length sex sampling	
***disease**	size distribution	
distribution	**Disease**	
spatial distribution	bacteria	
energetics	bitter crab syndrome	
***fecundity**	black mat syndrome	
***feeding**	developmental toxicity	
field experiment	domoic acid	
geographic distribution	microbial diseases	
energetics	nemertean worm	
injury	nematode worm	
juvenile	PSP	
***growth**	parasitic barnacles	
laboratory experiment	virus	
***larvae**	**Fecundity**	
limb loss	egg deposition surveys	
life history	egg development	
life history strategy	egg mortality	
maturity	egg loss	
metabolism	egg separation	
metamorphosis	hatching time	
metamorphosis (chemical)	**Feeding**	
***migration**	diet	
	feeding behavior	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
***molt (ecdysis)**	feeding ecology	
morphology	food composition	
morphometrics	food preference	
***mortality**	forage ratio	
oxygen deficiency	foraging activity	
parasite	niche overlap	
predation	nutrient	
physiology	stomach analysis	
preservation	**Growth**	
***recruitment**	abnormal growth	
***reproduction**	allometric growth	
***roe**	density dependence	
shell condition	growth curve comparisions	
carapace	growth models	
carapace length	-see also Growth stat for statistical growth models	
shrinkage	growth rate	
spawning	isometric growth	
starvation	length-based method	
taxonomy	life stages	
thermal tolerance	nonlinear growth	
toxic bloom	regeneration	
transplantation	size composition	
	weight-length relationship	
	weight-width relationship	
	Larvae	
	larval abundance	
	larval advection	
	larval development	
	larval identification	
	larval mortality	
	larval recruitment	
	larval settlement	
	larval transport	
	Migration	
	migration patterns	
	migratory timing	
	Molt	
	molt cycle	
	molt frequency	
	molt increment	
	molting probability	
	terminal molt	
	Mortality	
	fishing mortality	
	handling mortality	
	natural mortality	
	mortality rate	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	Recruitment	
	recruitment model	
	-- see also statistical models under **STATISTICS**	
	recruitment strength	
	recruitment success	
	recruitment variation	
	stock-recruitment relationship	
	-- see also **STOCK** and recruitment model	
	Reproduction	
	fertilization	
	mating (behavior)	
	delayed mating	
	mating success	
	reproductive capacity	
	reproductive season	
	sex change	
	sex ratio	
	sex/size effect	
	sexual development	
	sexual maturity	
	maturation	
	Roe	
	percent roe	
	roe sampling	
ECOLOGY		
artificial shelter		
abiotic		
benthic environment		
biogeography		
biotic		
behavior		
behavioral ecology		
character displacement		
community ecology		
community structure		
competition		
conservation		
contamination		
demographics		
ecosystem		
ecosystem modelling		
environment		
***environmental impact**	**Environmental Impact**	
fossil	blasting	
logging	dredging	
marine debris	drilling	
	entrainment	
	logging	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
***oil**		
***pollution**	**Oil**	
PSP monitoring	oil effects	
predator	oil spill	
prey	oil spill impact	
predation	**Pollution**	
r-k selection	chemical pollution	
season	**Trophic**	
seasonal distribution	trophic indices	
shelter/cover	trophic relationships	
latitudinal variation	primary production	
sediment	secondary production	
***trophic**	zooplankton	
	phytoplankton	
	phytoplankton abundance	
	microzooplankton	
	algae	
ECONOMICS		
bioeconomics		
bioeconomic models		
exvessel price		
fishery economics		
market		
overcapitalization		
processing		
economic statistics		
FISHERIES		
***access**	**Access**	
***biological reference points**	individual fishing quotas	
bycatch	limited entry	
capture	moratorium	
***catch**	prohibited species	
crab processor	**Biological Reference Points**	
discard	F0.1	
domestic fishing	maximum economic yield	
***effort**	maximum sustained yield	
enforcement	optimum yield	
escapement	**Catch**	
exploitation rate	catch/effort data	
***fishing gear**	CPUE	
forecasts	catch predictions	
foreign fishing	catch statistics	
fisherman behavior	harvest policy	
fishery description	harvest rate	
fishing effects	harvest strategy	
fishing methods	harvest trends	
fishing power	guideline harvest	
***fisheries management**	optimal harvest	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
ghost fishing (still fishing)	quota	
***handling effects**	TAC	
harvest	**Effort**	
joint venture	effort standardization	
meat quality	fleet capacity	
multispecies fishery	vessel efficiency	
***observer**	**Fishing Gear**	
other (fisheries)	--see also Gear technology	
overfishing	bait	
personal use	catchability	
recreational	catchability coefficient	
regulations	derelict gear	
seafood quality	dive	
sport fishing	dory	
test fishery	dredge	
	***escape mechanism**	**Escape Mechanism**
	hook and line	GTR
	jig	twine escape mechanism
	longline	**Net**
	mesh size	driftnet
	***net**	gillnet
	***pot**	purse seine
	rake	seine
	gear effects	**Pot**
	gear efficiency	cod pot
	gear restriction	crab pot
	gear saturation	pot definition
	gear selectivity	shrimp pot
	lost gear	**Trap**
	soak time	trap design
	***trap**	trap venting
	troll	
	trawl	
	Fisheries Management	
	adaptive management	
	Magnuson Act (MFCMA)	
	management plans	
	3S management	
	management history	
	management policy	
	management risk	
	management strategy	
	management tools	
	pot limit	
	prohibited species	
	public administration	
	season	
	size limits	
	threshold	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	Handling Effects	
	autotomy	
	chelatomy	
	confinement	
	density	
	exposure	
	hypoxia	
	illumination	
	(photoperiod, light sensitivity)	
	injury	
	limbloss	
	pressure change	
	sorting techniques	
	stress	
	storage/holding	
	temperature	
	Observer	
	observer data	
	observer manual	
	observer program	
	observer report	
GEOGRAPHIC AREA	**Alaska**	
***Alaska**	Statewide	
***United States**	North Pacific	
***Country/continent/province**	Alexander Archipelago	
***terms**	Arctic Ocean	
	Bristol Bay	
	Chukchi Sea	
	Gulf of Alaska	
	Norton Sound	
	Region 4	
	Westward	
	Western Aleutian Islands/Adak	
	Alaska Peninsula	
	BS/AI	
	Bering Sea	
	Aleutian Islands	
	Chignik	
	Eastern Aleutian Islands	
	Kodiak	
	Pribilof Islands	
	St. Matthew Island	
	Region 3	
	AYK	
	Arctic-Yukon-Kuskokwim	
	Region 2	
	Southcentral	
	Cook Inlet	
	Kachemak	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	Kamishak	
	Lower Cook Inlet	
	Prince William Sound	
	Region 1	
	Southeast Alaska	
	Haines	
	Juneau	
	Glacier Bay	
	Ketchikan	
	Petersburg	
	Sitka	
	Yakutat	
	United States	
	Atlantic Ocean	
	Atlantic Coast	
	California	
	East Coast	
	Florida	
	Georges Bank	
	Great Lakes	
	Gulf of Mexico	
	Lake Michigan	
	Maine	
	Massachusetts	
	North Pacific	
	Northeast	
	Northwest	
	Oregon	
	Pacific Northwest	
	Pacific Ocean	
	Pacific Coast	
	Puget Sound	
	Rhode Island	
	Southeast	
	Southwest	
	Texas	
	Washington	
	West Coast	
	Country/Continent/Province	
	Africa	
	South Africa	
	Arabian Gulf	
	Argentina	
	Australia	
	Atlantic Canada	
	Baltic Sea	
	Brazil	
	British Columbia	
	Canada	
	China	
	Denmark	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	Former Soviet Union	
	Greenland	
	Iceland	
	Irish Sea	
	Italy	
	Japan	
	Newfoundland	
	New Zealand	
	North America	
	North Sea	
	Norway	
	other country	
	Philippines	
	Portugal	
	Russia	
	Sweden	
	United Kingdom	
	Vietnam	
	Wales	
	Yugoslavia	
	Terms	
	exclusive economic zone	
	EEZ	
	inshore	
	nearshore	
	offshore	
	offshore processing	
PHYSICAL ENVIRONMENT		
arctic		
***atmosphere**		
chill factor	**Atmosphere**	
earth history	light	
geology	pressure	
***habitat**	gravity	
interannual variability	**Habitat**	
limnology	coastal	
meteorology	continental shelf	
***oceanography**	demersal	
paleontology	estuary	
subarctic	euphotic zone	
subtropical	intertidal	
temperature	littoral zone	
tropical	pelagic	
volcanic	subtidal	
weather	**Oceanography**	
wind	***current**	**Current**
	el niño	front
	la niña	downwelling
	***water**	upwelling
		current velocity

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
		wave height
		Water
		bathymetry
		depth
		dissolved oxygen
		salinity
		sea level pressure
		sea surface temperature
		turbidity
		water circulation
		water column
		water quality
		water temperature
SPECIES		
{note: no scientific names used}		
demersal species		
***echinoderm**		
***fish**		
***mollusc**		
multispecies		
pelagic species		
***shellfish**		
	Echinoderm	
	sea cucumber	
	sea urchin	
	starfish	
	Fish	
	capelin	
	dogfish	
	***groundfish**	
	bottomfish	
	***herring**	
	mackerel	
	other finfish	
	pomfret	
	sandlance	
	***salmon**	
	southern bluefin tuna	
	tuna	
	Mollusc	
	***abalone**	
	***clam**	
	cockle	
	mussel	
	octopus	
	other mollusc	
	oyster	
	American oyster	
	***scallop**	
	snail	
	squid	
	Shellfish	
	barnacle	
		Groundfish
		flatfish
		halibut
		sole
		cod
		Atlantic cod
		Northeast Arctic cod
		Pacific cod
		haddock
		other groundfish
		Pacific Ocean perch
		pollock (pollack)
		walleye pollock
		rockfish
		demersal shelf rockfish
		nearshore rockfish
		pelagic rockfish
		slope rockfish
		sablefish (blackcod)
		Pacific sardine
		skate
		thorny skate
		sculpin
		whiting
		Pacific whiting
		yellowfin sole

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	***crab**	**Herring**
	***lobster**	Atlantic herring
	***shrimp**	North Sea/Baltic herring
		Pacific herring
		Salmon
		Atlantic salmon
		Pacific salmon
		chinook salmon
		chum salmon
		coho salmon
		pink salmon
		sockeye salmon
		Abalone
		blacklip abalone
		Northern abalone
		pink abalone
		red abalone
		Sitka abalone
		Clam
		butter clam
		geoduck
		manila clam
		quahog
		razor clam
		surf clam
		Scallop
		Atlantic scallop
		Iceland scallop
		purple-hinge rock scallop
		sea scallop
		weathervane scallop
		Crab
		anomuran crab
		blue crab
		brachyuran crab
		Dungeness crab
		European edible crab
		Fiddler crab
		hair crab
		hermit crab
		hybrid crab
		blue king crab
		brown king crab
		golden king crab
		deep sea king crab
		red king crab
		red rock crab
		snow crab
		spanner crab
		soft-whelled crab
		stone crab

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
		Tanner crab
		three-spot swimming crab
		toad crab
		true crab
		xanthid crab
		Lobster
		American lobster
		Norwegian lobster
		rock lobster
		slipper lobster
		southern rock lobster
		spiny lobster
		Shrimp
		coonstripe shrimp
		humpy shrimp
		northern shrimp
		pink shrimp
		pandalid shrimp
		penaeid shrimp
		pot shrimp
		sidestripe shrimp
		spot shrimp
		trawl shrimp
STATISTICS		
analysis of covariance		
analysis of variance		
autocorrelation		
Bayesian statistics		
bias		
binary data analysis		
bootstrap		
chaos		
***classification**		
computer simulation	**Classification**	
confidence intervals	--see STOCK, Stock Identification	
binomial	cluster analysis	
correlation	dendogram	
cross validation	discriminate analysis	
decision analysis	identification	
delta method	Fowlkes-Mallows	
***distribution**	principle component analysis	
error	**Distribution**	
experimental design	contagious	
exploratory data analysis	***distribution methods**	**Distribution Methods**
geographic information system	distribution patterns	Marquardt
***goodness of fit**	gamma	Newton
hypothesis testing	lognormal distribution	Hasselblad
influence function	normal distribution	Gauss-Seidel
jackknife	Poisson	
kernal regression	**Goodness of fit**	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
***mark recapture**	chisquare	
***maximum likelihood**	G-test	
Monte Carlo	Kolmogorov Smirnov	
multivariate analysis	**Mark recapture**	
neural network	Delury	
nonparametric	Jolly Seber	
optimal control theory	Leslie	
***population statistics**	Petersen	
power	Schnabel	
power analysis	**Maximum Likelihood**	
profile analysis	likelihood estimation	
randomization	likelihood ratio tests	
***regression**	conditioning	
repeated measures analysis	**Population statistics**	
response surface analysis	population density	
risk analysis	population dynamics	
robust methods	population parameters	
runs test	population projection	
***sampling**	population trends	
sample size	**Regression**	
smoothing	autoregression	
kernal smoothing	geometric mean functional relationship (GMR)	
significance	logistic regression	
***software**	contingency tables	
***spatial statistics**	linear rank tests	
standard error	**Sampling**	
***statistical models**	adaptive sampling	
statistical theory	catch sampling	
***stochastic process**	distance sampling	
stock reduction analysis	sampling design	
***survey design**	line transect sampling	
systems theory	multi-stage sampling	
time series	pot sampling	
variance estimators	quadrant sampling	
variance function	sampling theory	
year-class analysis	stratified sampling	
	strip transect sampling	
	total enumeration	
	trap sampling	
	video sampling	
	Software	
	evaluation	
	FUCUS	
	ELEFAN	
	GENSTAT	
	MULTIFAN	
	POPAN (population analysis)	
	SELECT	
	Spatial Statistics	
	kriging	

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
	spatial correlation	
	spatial distribution	
	spatial trends	
	Statistical Models	**Biomass**
	***biomass**	biomass estimation
	abundance	abundance estimation
	***age structured model**	inseason abundance
	biological response model	**Age Structured Model**
	general linearized model	Baranov catch
	***growth models**	Beverton and Holt
	length based model	catch curve
	Leslie Delury	cohort analysis
	mixture model	Delury method
	multiple comparison procedures	Deriso
	multispecies model	dynamic pool
	***nonage structured model**	Ricker
	***recruitment model**	stock synthesis
	size structured model	virtual population analysis
	transfer function model	**Growth Models**
	Stochastic Process	(growth - statistical models)
	dynamic stochastic process	--see also Growth under BIOLOGY
	stochastic process programming	allometric growth model
	Survey Design	Gompertz
	abundance survey	isometric growth model
	aerial survey	nonlinear growth model
	hydroacoustic survey	Schnute
	pot survey	von Bertalannfy
	tagging survey	Walford plot
	trap survey	**Nonage Structured Model**
	trawl survey	Box-Jenkins model
		logistic
		logistic regression
		Pella Tomlinson
		stock production model
		stock reduction
		surplus production model
		Schaefer
		Recruitment Model
		Beverton Holt
		optimum escapement
		Ricker spawner recruit
		spawner recruit model
STOCK		
abundance		
assessment		
***stock identification**	**Stock Identification**	
stock rebuilding	***genetic**	**Genetic**
stock-recruitmentrelationship	other (identification)	electrophoresis
--see **Recruitment Model** under **STATISTICS**	parasites	evolution
	***phenotypic**	genetics policy

COLUMN	SUBCOLUMN 1	SUBCOLUMN 2
survey report	mark/recapture	Hardy-Weinberg hybridization mDNA ontogentic polymerase chain reaction species diversity **Phenotypic** morphometrics otolith scale pattern
TECHNOLOGY acoustics ***aquaculture** mariculture ***artificial** bioassay computer analysis computer simulation ***gear technology** graphics data presentation enhancement other (technology) photography ROV sonar submersible NURP laser ***tag**	**Aquaculture** aquaculture policy aquatic plant aquatic farm **Artificial** artificial collectors artificial substrate **Gear Technology** --see also Fish gear under FISHERIES crab collectors digital imaging durometer image processor video imaging **Tag** anchor location anchor tag Atkins tag coded wire tag FLOY tag Petersen disk tag PIT stain	