Literature Reviews: Know Your Options

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Office of Graduate Professional Development, 2/9/2021

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For taking time to invest in you!

More about me: https://guides.uflib.ufl.edu/stapleton

Image: https://www.ionos.com/digitalguide/fileadmin/DigitalGuide/Teaser/totp-t.jpg

Workshop Logistics

- Chat will be monitored
- Poll responses will be anonymous
- There will be several pauses for Q&A
- Presentation slides will be available after the session

Workshop Objectives

- Describe the purpose of literature reviews
- Understand main differences in various types of reviews
- Identify library resources useful to writing reviews

What is a literature review?

A summary of existing knowledge on a topic with an original point of view that contributes to the advancement of knowledge on that topic.



A literature review...

- Defines & clarifies what is known
- Identifies relationships & inconsistencies
- Proposes areas for future research

provides context to your research topic

Points to address in a literature review

- Why is this topic important? What new insights do you offer? Does your review help to define, illustrate or advance theory on the topic?
- Specify your point of view (thesis, argument) in the introduction
- Explain why you describe some publication findings as strong and others as weak
- Identify the major patterns or trends in the literature
- Identify classic or landmark studies and describe their relationship to subsequent studies
- Describe any pertinent controversies or inconsistencies
- Note and explain any gaps in the literature. What areas need more research?
- Clearly describe or discuss implications in your conclusions
- Is your manuscript coherent, do you have a clear path of your argument?

Adified from: Galvan & Galvan (2017). Writing Literature Reviews for Students in the Social & Behavioral Sciences.

Questions?



Summary of Steps for a Literature Review

- Identify your topic
- Develop appropriate search terms
- Identify appropriate databases to search
- Conduct literature searches
- Collect relevant results
- Skim & categorize
- Read in-depth & take notes
- Synthesize results
- Outline & Write
- Review & Revise

Good Resource: Tips for writing your first scientific literature review article by E. Crawford, 12/1/2011,

https://www.asbmb.org/asbmb-today/careers/120111/writing-a-scientific-literature-review-article

Identify the Main Research Concepts in Your Research Question

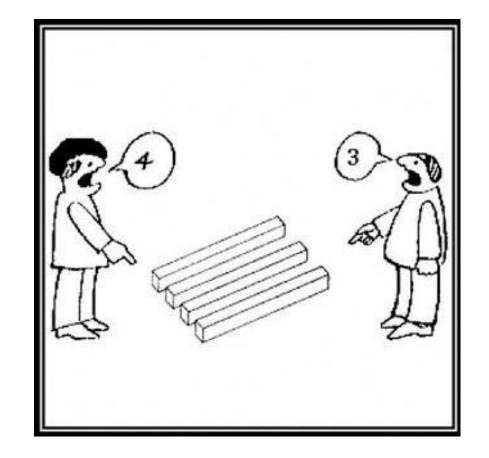
Q1. Do people who begin smoking as teens have a greater risk of developing cancer than people who start smoking later in life?

Q2. Will release of sterile male psyllids, the insect vector of citrus greening, reduce the spread of this disease?

Develop appropriate search terms for each of your key research concepts

Keywords	Concept #1	Concept #2	Concept #3
Alternative Terms (Synonyms)			
Broader Terms			
Narrower Terms			
Relevant Databases			

Be aware how others may describe a topic



Will the release of sterile male psyllids, the insect vector of citrus greening, reduce the spread of this disease?

Keywords	sterile male	psyllid	citrus greening	disease spread
Alternative Terms (Synonyms)			Huanglongbing HLB	
Broader Terms			Citrus bacterial disease Vector-transmitted pathogen	
Narrower Terms			Proteobacteria Phloem-restricted bacteria Candidatus Liberibacter	
Relevant Databases			CAB Abstracts, Web of Science, Biosis, Citrus Greening Database	

Locate Recommended Databases for Your Topic

Find
My Accounts
Libraries & Collections
About
Contact Us **Research Guides**Subject/Area Specialists

The Subject/Area Specialists List provides a listing by subject/area for expert contacts within the Libraries.

SPECIALISTS →

https://uflib.ufl.edu/find/research/



Subject/Area Specialists

Subject/Area Specialty	 Specialist First Name 	 Specialist Last Name
3D Services	Sara	Gonzalez
Advertising	April	Hines
Aerospace Engineering	Samuel	Putnam
African American (Special Collections)	Florence	Turcotte
African American Studies	Stephanie	Birch
African Studies	Dan	Reboussin
Aging & Geriatrics	Ariel	Pomputius
Agricultural & Biological Engineering	Amy	Buhler
Agricultural Education & Communication	Melody	Royster
Agricultural Statistics	Michelle	Leonard
Agriculture, General	Suzanne	Stapleton

A Sample Library Research Guide (LibGuide)

Look at the Journal Articles tab in a Library Research Guide for your discipline

Search

Search this Guide

Horticultural Sciences: Journal Articles

Locate information related to the Horticultural Sciences

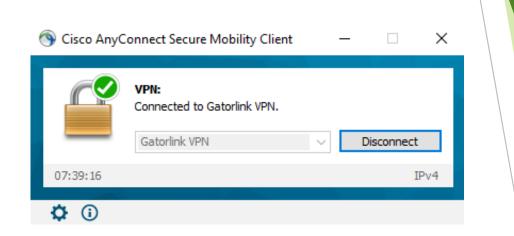
Horticultural Science Home	Jou	rnal Articles	Books & E-Books	Dissertations	Citation Management Softwa	are Evaluating Resources
Managing Your Data O	RCID					
Article Types		Horticultu	ral Science Databases	×		Journal Articles
What type of article an you looking for or loo at?	king	Gr Iar de	B Abstracts eat for multi-disciplinary r gest bibliographic databa velopment literature in the man health and nutritior	uses covering internati e fields of agriculture,	ional research and	Journal articles are available The libraries subscribe to many journals. Check for a specific jo in the library catalog or view a li journals available. Be sure to fo
some of them overlap. Here an some hints to help identify characteristics of an article:		resources. Agricola (National Agricultural Library Catalog) Primarily for U. S. agriculture. A bibliographic database consisting of literature citations for journal articles, monographs, proceedings, theses,			0	off-campus access guidelines to able to see full-text. Use Interlib Loan to request articles from a journal that is not available from
Research articles are typically published in a journal a are highly likely to have been p		rep are	patents, translations, audiovisual materials, computer software, and technical reports pertaining to all aspects of agriculture. Links to full text documents are provided whenever possible.		catalog.	
reviewed. They are structured I reports, with sections for: the abstract or summary of the proj introduction and literature revie hypothesis or experimental que	ect, w,	Gr jou ne bo	5 5	research, medical res dexing of meetings, re	n. Indexes over 6000 earch, and discoveries of view articles, books reviews,	Keeping Current BrowZine™ is now available at your library
method or process used, data						

٦y journal list of follow to be rlibrary om the

Tips:

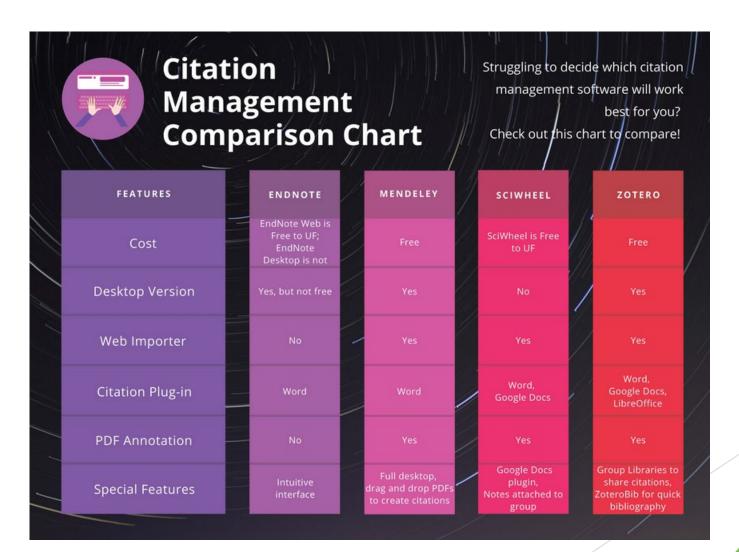
Remember to use the VPN! When you are off-campus, use the VPN to get full access to library resources.

Learn how to use 2-3 of the subject databases from tutorials or workshops and exploring. These are powerful tools that can lead to more efficient literature searching.



Library Workshop Registration https://uflib.ufl.edu/my-accounts/workshop-registration/

Collect Publications from Your Searches



Summary of Steps for a Literature Review

- Identify your topic
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Questions?



Types of Literature Review

- Annotated Bibliography
- Traditional ("Narrative")

Annotated Bibliography

A list of references that includes a summary or evaluation of each source. Annotations typically include:

- Summary: what is the source about?
- Assessment: Is the source credible?
- Reflection: How does the source impact your research topic?

Good resource: Purdue Online Writing Lab: https://owl.purdue.edu/owl/general_writing/common_writing_assignments/annotated_bibliographies/index.html

Traditional (Narrative) Literature Review

A narrative examination of recent literature.

May or may not include comprehensive searching and quality assessment of results. Typically tells a story of prior research, organized chronologically. Often divided into sub-topics.



Comparing the Annotated Bibliography to the Literature Review

	Annotated Bibliography	Literature Review
Purpose	Provides the reader with an ordered list of sources for additional reading. Usually also provides brief explanations of why each source is credible and relevant to the topic.	Provides an overview of a particular topic or problem by summarizing and explaining the most significant sources in the field.
Structure	Sources are separated from each other and are arranged alphabetically, so they will be easy to locate.	Sources are integrated into paragraphs based on the progression of the topical overview, and they may be mentioned more than once.
Components	Each item in the list uses the formal citation style (usually APA, MLA, or Chicago) to cite a single source and includes a short paragraph with a summary explaining its credibility and relevancy.	Uses an introduction to explain the topic, synthesizes sources progressively as the topic is explained through the body, and then concludes by summarizing the overall background presented.

Buttram, MacMillan & Koch, 2012. https://www.una.edu/writingcenter/docs/Writing-Resources/Comparing%20the%20Annotated%20Bibliography%20to%20the%20Literature%20Review.pdf

Types of Literature Review

- Annotated Bibliography
- Traditional ("Narrative")
- Scoping Review
- Systematic Review
- Meta-analysis
- ...and more...

Critics: informal, subjective, not reproducible

Evidence-based syntheses: Structured, comprehensive, reproducible.

Aim "to reduce the likelihood of being misled by biases and chance"

Chalmer, Hedges & Cooper (2002). A Brief History of Research Synthesis, https://doi.org/10.1177/0163278702025001003

Modern Types of Literature Reviews : Evidence-based Synthesis

Increasingly, literature reviews use reproducible methodologies

To decrease statistical imprecision and To reduce bias

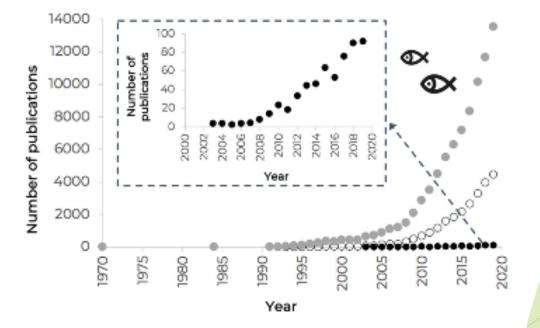


Fig. 1. Number of publications per year in scientific journals that include the search terms "life cycle assessment" (grey circles), plus "food" (white circles) or plus "fish" and "seafood" (black circles) accessed in Scopus in June 2020.

Scoping Review

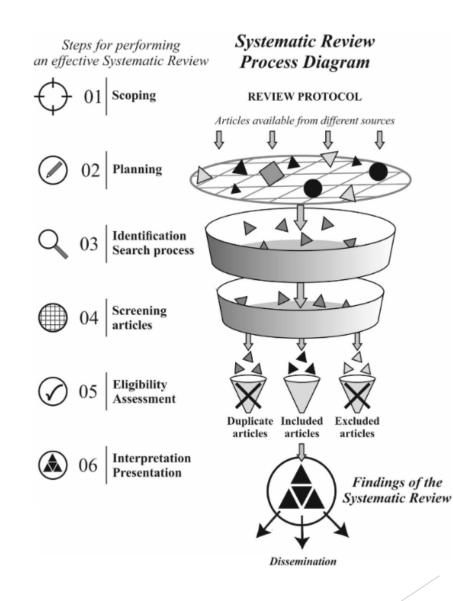
Preliminary review to map key concepts, types of evidence, and gaps in research related to a topic.

Typically, follows a set of standards, uses a broad topic & search terms. Often used to determine whether a subsequent systematic review is feasible.

Systematic Review

A systematic review is a review of evidence relevant to a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant research, and to collect and analyze data from the studies included.

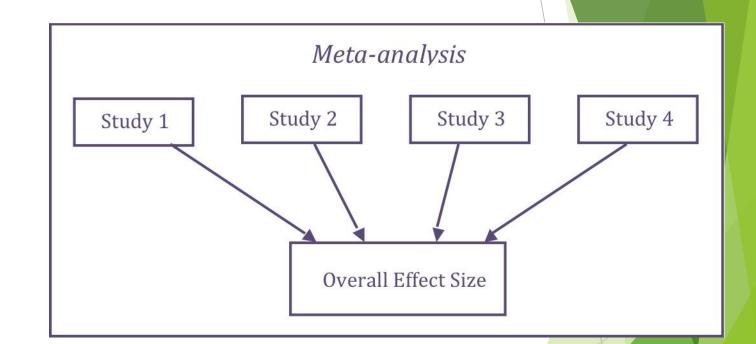
- Collaboration for Environmental Evidence



Meta-analysis

A quantitative estimate for the effect of a treatment based on statistical analysis of previously published data from multiple studies

Typically begins with a systematic review.



Example: Stampfer MJ, Goldhaber SZ, Yusuf S, et al. Effect of intravenous streptokinase on acute myocardial infarction: pooled results from randomized trials. N Engl J Med. 1982;307:1180-1182



A time-limited review of published evidence, using systematic review methods.

Frequently used for policy development.

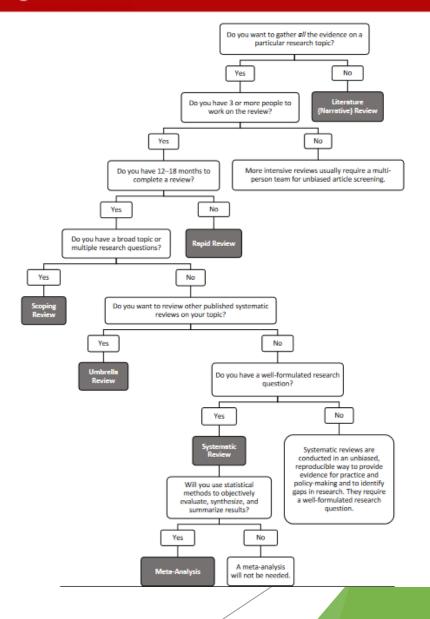
Questions?



What Type of Review Is Right for You?



Cornell University Library



A Decision Tree to Select the Appropriate Type of Review

► DeMello, C. (2019). Systematic Review Decision Tree Methodologies.

Retrieved from https://guides.library.cornell.edu/eviden ce-synthesis/types

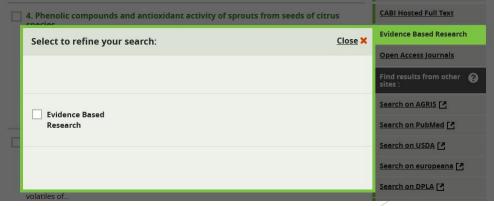
Your Next Steps

Develop your literature review plan:

- What is your research question?
- What are the characteristics of the studies you want to include in your review?
- What are your goals (e.g. timeframe, types of conclusions)?
- What type of review is appropriate?

What Kind of Review Is This?

- Look for type of review in article label, title, abstract, and keywords.
- Read the Methods section: is the literature review structured, explained, and reproducible?
- Databases are developing new filters to find evidence-based syntheses (e.g. search for meta-analysis)



CAB Direct filter for evidence-based research

Sample Reviews



Accepted: 28 July 2020 Keywords: Citrus, editing, cisgenesis, fruit quality, transformation, regeneration, marker-free vectors, Published: 14 August 2020 early flowering

Citation: Salonia F, Ciaccull A, Polas L, Pappalardo HD, La Matta S and Licciardelo C (2020) New Plant Breading Tachniques in Citrus for the Improvement of Important Agronomic Tratts: A Raviae. Front. Plant Sci. 11:1234. doi: 10.3898/bcs.2020.01234

Citrus belongs to *Rutaceae* family and is among the most important fruit crops in the world. Citrus fruits represent a source of macro- and micronutrients (*Ting*, 1980) and of dietary fiber (Marin et al., 2007). They are also rich in antioxidants compounds (Liu et al., 2012), reveal anticancer, and anti-inflammatory properties (Reviewed in Ma et al., 2020), and are effective at reducing the risk of

Frontiers in Plant Science | www.frontiersin.org

August 2020 | Volume 11 | Article 1234

Häkkilä et al. Environ Evid (2021) 10:2 https://doi.org/10.1186/s13750-020-00216-6

Environmental Evidence

Open Access

SYSTEMATIC REVIEW

Are small protected habitat patches within boreal production forests effective in conserving species richness, abundance and community composition? A systematic review

Matti Häkkilä¹¹¹⁰, Anna Johansson², Terhi Sandgren³, Anne Uusitalo⁴, Mikko Mönkkönen^{1,5}, Pasi Puttonen⁶ and Sini Savilaakso^{2,6}

Abstract

Background: In boreal zone forest management is changing and degrading forest habitats, which has caused declines in biodiversity. To mitigate these harmful effects in production forests, small-scale habitats with high biodiversity values have been protected within them. These habitats include woodland key habitats, and other small habitat patches protected by voluntary conservation actions. In this systematic review we synthesize the evidence on the value of small protected habitat patches (SPHP) within production forest landscapes for biodiversity. Review question: Are small protected habitat patches within boreal production forests effective in conserving species richness, abundance, and community composition?

Methods: Both peer-reviewed and grey literature were searched from bibliographical databases, organizational websites and internet search engines in English, Finnish, Swedish and Russian. Articles were screened at two stages (title/ abstract and full text) and the validity of the included studies were assessed. Screening and validity assessment were based on predetermined criteria. After data extraction, narrative and quantitative syntheses were conducted. Influences of effect modifiers were tested, and sensitivity analyses were conducted.

Review findings: During the searches 19,458 articles were found. After duplicate removal and title/abstract screening 336 articles remained. During full text screening 41 articles were included and 35 of them (174 studies) were included in naritive synthesis. 28 articles with 127 studies had suitable data for meta-analysis. SPHBs had significantly higher species richness compared to production forests. When compared to natural forests, there was no significant difference. Forest management in areas surrounding SPHPs did not have impact on species richness of these patches. Individual abundance was significantly higher in SPHPs compared to natural or production forests. There was significantly more dead wood in SPHPs compared to production forests, but when compared to natural forests there was no significant difference. Community composition was different between SPHPs and both production and natural forests.

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https://doi.org/10.1186/s13750-020-00216-6

Sample Review Diagram in Systematic Review

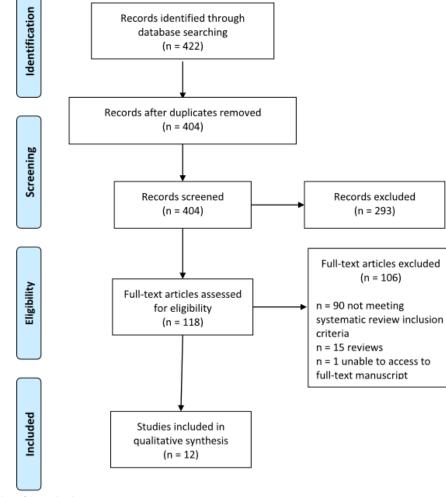


Figure 1. Flow chart of the study selection.

Resources

 Writing Literature Reviews : A Guide for Students of the Social and Behavioral Sciences



by Jose L. Galvan , and Melisa C. Galvan PUBLISHER Taylor & Francis Group DATE 2017-04-05

SYSTEMATIC MORCACHES TO A DEPOSITION MILITARIUM REVENUE MILITARIUM REV

Systematic Approaches to a Successful Literature Review By Andrew Booth, Anthea Sutton & Diana Papaioannou Sage Publishing 2016

- Library collections
- Your subject-specialist librarian

Covidence

- Library Research Guides for your field https://uflib.ufl.edu/find/research/
- Systematic Review Support: Tools such as Covidence and Rayyan

https://guides.uflib.ufl.edu/Covidence

Workshops at https://uflib.ufl.edu/my-accounts/workshop-registration/ Patti McCall-Wright, CTSI https://guides.uflib.ufl.edu/SR

UF Writing Program at https://writing.ufl.edu/writing.stud

Review of Topics Covered

- Describe the purpose of literature reviews
 - To contextualize new knowledge within what is known
 - Evidence-based synthesis types also aim to reduce bias and chance
- Understand main differences in various types of reviews
 - Annotated bibliography, traditional narrative review and evidence-based syntheses (systematic review, scoping review, meta-analysis, rapid review)
- Identify library resources useful to writing reviews
 - Librarians are here to help!

Ask-A-Librarian

https://uflib.ufl.edu/find/ask/



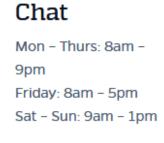
Text Us Text us at 1-813-463-2283

Text now! →

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Call Call a reference librarian at (866) 281-6309

Call now \rightarrow



 $\textbf{Chat now!} \rightarrow$



Ask Us!

Email

Email us – we try to respond in a few hours!

 $\textbf{Email} \rightarrow$

References

Chalmers, I., Hedges L. V., & Cooper, H. (2002). A Brief History of Research Synthesis, https://doi.org/10.1177/0163278702025001003

Crawford, E. (2011). Tips for writing your first scientific literature review article, <u>https://www.asbmb.org/asbmb-today/careers/120111/writing-a-scientific-literature-review-article</u>

DeMello, C. (2019). Systematic Review Decision Tree Methodologies. Retrieved from https://guides.library.cornell.edu/evidence-synthesis/types

Grant, M. J. & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies, <u>https://doi.org/10.1111/j.1471-1842.2009.00848.x</u>

Thank you!



Please complete your workshop evaluation.