

Six steps to SCIENTIFIC WRITING AND PUBLISHING

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STEP ONE – THE INITIAL IDEA

**Decide what is the most interesting finding from your study
– there may be more than one (but don't spread your findings too thinly)**

**Don't publish for publishing sake. Do so only when you think you have something
worth communicating**

Have an idea early on which journal(s) you plan to send your manuscript(s)





STEP TWO – GATHERING THE RESULTS

Select and synthesise the key results that support your findings

**Decide what is most appropriate as a graphic (map, histogram, graph, etc)
and what is best as a table**

Use graphics to illustrate findings, and minimize repetition of those in the text

STEP THREE – UNDERTAKING ROBUST ANALYSES

Ensure adequate statistical tests or models have been applied

Involve an experienced statistician or modeler if possible

STEP FOUR – THE WRITING STAGE

REMEMBER: Clarity, brevity and organisation

- a) Write the introduction – place the paper in a general context;
state briefly the reason for the paper's existence**
 - conduct a careful literature review (don't rely on Google),
selecting key references, don't keep quoting your own work**
 - keep the introduction brief and to the point,**
- clearly presenting the nature and scope of the problem to be investigated,
and the objectives of your paper**

**b) Write the materials & methods – keep this concise whilst ensuring
all the main details are included
(reference more detailed explanations where appropriate)**

- use appendices where necessary, e.g. details of models or statistical tests**
- keep methods to the methods section and results to the results section**
- if your methods are lengthy, use subheadings to organize (and consider
matching in the results; ensure meticulous consistency of both)**

**c) Present the results accurately and concisely in a logical sequence as if you
were telling a story, and illustrate with graphics
(refer to at the end of sentences)**

- d) Ensure the graphics are clear and fully labeled, with appropriate legends (mentioning units); don't repeat details of tables or graphics in the text**
- e) Write the Discussion putting your results in a wider context and draw upon other studies as appropriate (don't leave out findings that appear to contradict yours); discuss the data in the context of the justification & objectives in the Introduction (don't just repeat the results)**
- f) Produce succinct conclusions (based upon the results not on your general knowledge), with your key message(s); any speculation should be clearly stated as such; suggest future or additional research**
- g) Prepare the references (carefully!); check against originals where possible**
- h) Write the abstract ensuring that it is indeed an abstract, summarizing the paper. Don't use it to add extra conclusions**

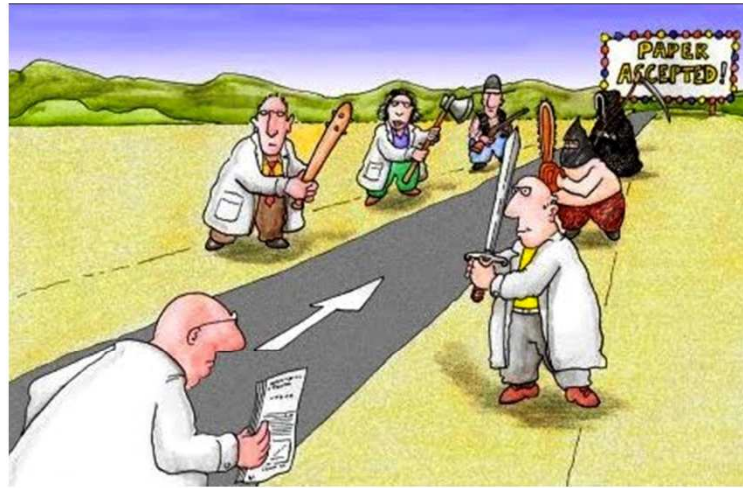
- i) Decide upon a title – keep it short (10 words max.) and to the point: be specific and informative; where appropriate, include nature of the study, principal species involved, and geographic location**
- j) Think of some key words and a running head**
- k) Ensure you have the authors' names and affiliations listed correctly, including who is to be corresponding author; if appropriate, add an e-mail address**
- l) If the subject of the sentence performs the action, the sentence is in the active voice; it is in the passive voice if the subject receives the action; generally preferable to use active voice and first person**
- m) use present tense for established information, presentation of data; use past tense for Methods and Results, and presentation of someone else's work**
- n) Rework your paper several times. Eliminate unnecessary words and repetition, look for good organization and flow**

o) Provide graphics separately and not incorporated in the text; use a figure to indicate trends and a table to present exact numbers (don't duplicate); label them with enough information to be understood without reference to the text; number tables and figures separately, title tables at the top and figures at the bottom; for maps include a scale and a north arrow

p) Check paragraph structure remembering there are 4 main points to a well-constructed paragraph:

- (1) each paragraph begins with a solid topic sentence that quickly and clearly introduces the reader to the topic of that paragraph,**
- (2) each sentence in the paragraph relates to that topic,**
- (3) there is good transition between sentences, and**
- (4) there is good transition between paragraphs**

q) Proof read the final copy for typographical errors and misspellings; have a colleague read and critique your paper before submission (and for non-native English speakers, get one to check that for you)



STEP FIVE – THE PUBLISHING STAGE

**Settle on your first choice journal, based upon the subject matter and findings,
and the readership you are aiming at
(research what other papers have gone into that journal recently)**

**Read the journal's guidelines to authors and keep strictly to their instructions;
check formatting very carefully (add line numbers and spacing as appropriate)**

Submit ms with a short cover letter

**If asked, list potential reviewers
(don't just pick your friends; editors will see through that!)**



STEP SIX – THE REVIEW STAGE

Read carefully through reviews; answer each in turn as politely as possible

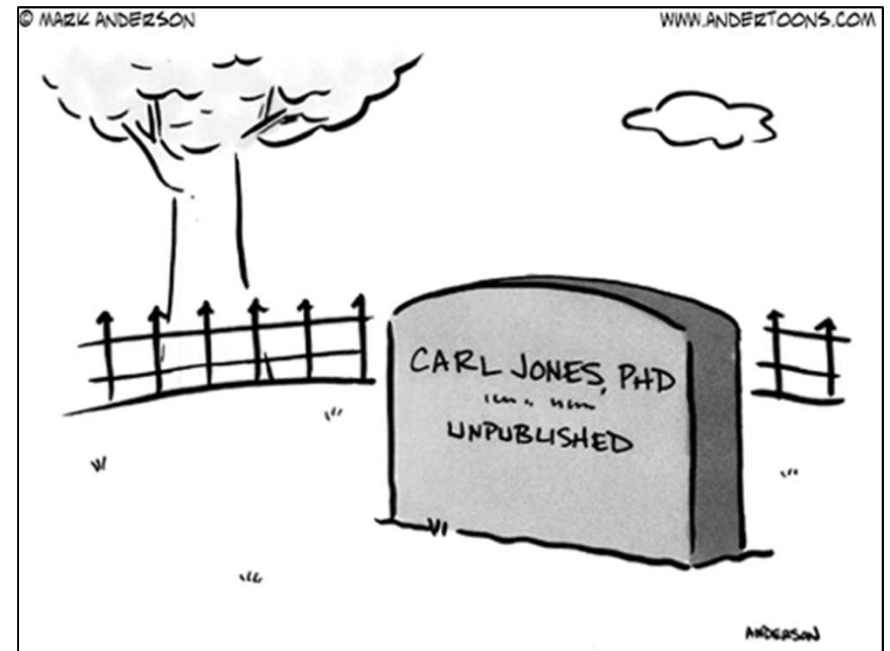
Don't be despondent if you get a rejection or are asked to re-submit only following a major revision. Be thick-skinned about it

Re-submit fairly promptly (within three months)



Where to Publish:

– Journals & their Impact Factors



MARINE MAMMAL JOURNALS

- Journal of Cetacean Research & Management

Impact Factor *n/a*

- Aquatic Mammals

Impact Factor *0.70*

- JMBA Special Issue

Impact Factor *1.02*

- Marine Mammal Science

Impact Factor *2.13*



MARINE BIOLOGICAL JOURNALS

- Marine Biodiversity Records

Impact Factor *n/a*

- Journal of the Marine Biological Association of the UK

Impact Factor *1.02*

- Marine Environmental Research

Impact Factor *2.34*

- Marine Biology

Impact Factor *2.47*

- Marine Ecology Progress Series

Impact Factor *2.55*



OTHER MARINE & FISHERIES JOURNALS

- Fishery Bulletin

Impact Factor 1.14

- Marine & Freshwater Research

Impact Factor 1.98

- ICES Journal of Marine Science

Impact Factor 2.28

- Canadian Journal of Fisheries
& Aquatic Sciences

Impact Factor 2.32

- Deep-Sea Research

Impact Factor 2.82



ECOLOGICAL JOURNALS

- Ecological Applications

Impact Factor 3.82

- Journal of Applied Ecology

Impact Factor 4.74

- Journal of Animal Ecology

Impact Factor 4.84

- Methods in Ecology & Evolution

Impact Factor 5.92

- Trends in Ecology and Evolution

Impact Factor 15.39

- Ecology Letters

Impact Factor 17.95



BEHAVIOUR JOURNALS

- Behaviour

Impact Factor 1.66

- Behavioural Ecology
& Sociobiology

Impact Factor 2.75

- Animal Behaviour

Impact Factor 3.07

- Behavioural Ecology

Impact Factor 3.22



CONSERVATION JOURNALS

- Aquatic Conservation
Impact Factor 1.92
- Endangered Species Research
Impact Factor 2.26
- Marine Pollution Bulletin
Impact Factor 2.63
- Animal Conservation
Impact Factor 2.69
- Biological Conservation
Impact Factor 3.79
- Conservation Biology
Impact Factor 4.35



GENETICS JOURNALS

- Conservation Genetics

Impact Factor 2.18

- Journal of Evolutionary Biology

Impact Factor 3.48

- Heredity

Impact Factor 4.11

- Genetics

Impact Factor 4.39

- Evolution

Impact Factor 4.86



ACOUSTICS JOURNALS

- Bioacoustics

Impact Factor 0.89

- Applied Acoustics

Impact Factor 1.10

- Environmental Monitoring and Assessment

Impact Factor 1.59

- Journal of the Acoustical Society of America

Impact Factor 1.65

- Journal of Experimental Biology

Impact Factor 3.24



TOXICOLOGY & PATHOLOGY JOURNALS

- Journal of Wildlife Diseases

Impact Factor 1.27

- Veterinary Record

Impact Factor 1.80

- Veterinary Pathology

Impact Factor 1.93

- Environmental Toxicology
& Chemistry

Impact Factor 2.62

- Environmental Health Perspectives

Impact Factor 7.24



MORE GENERAL JOURNALS - 1

- Mammalia

Impact Factor 0.81

- Canadian Journal of Zoology

Impact Factor 1.50

- Journal of Zoology

Impact Factor 2.04

- Journal of Mammalogy

Impact Factor 2.31

- Mammal Review

Impact Factor 3.42

- PLoS One

Impact Factor 3.73



MORE GENERAL JOURNALS - 2

- Biology Letters

Impact Factor 3.35

- Proceedings of the Royal Society B

Impact Factor 5.68

- Proceedings of the National Academy of Sciences of the USA

Impact Factor 9.74

- PLOS Biology

Impact Factor 12.69

- Science

Impact Factor 31.03

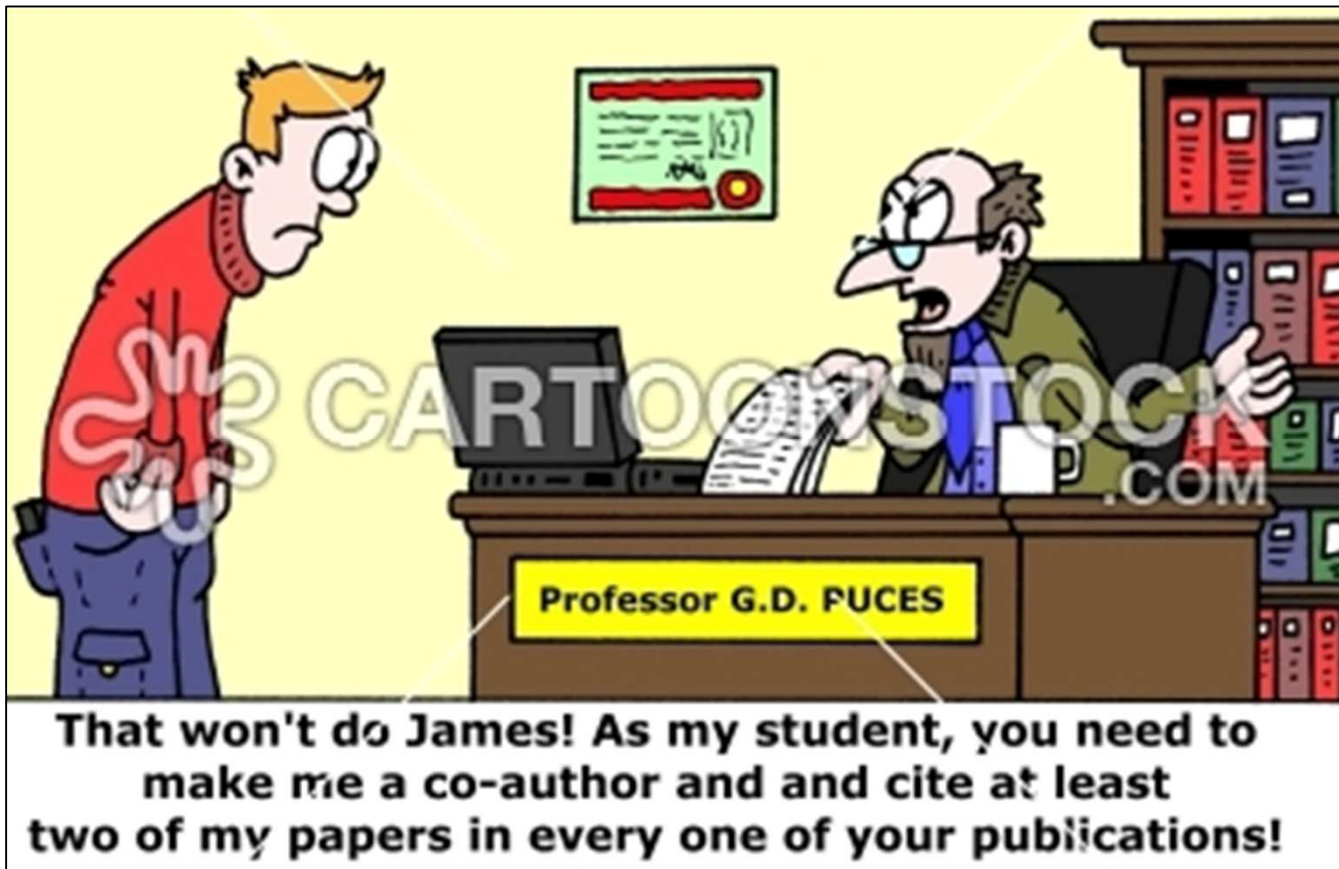
- Nature

Impact Factor 38.60



Your (real) Impact Factor:

$$\begin{array}{l} \text{Impact} \\ \text{Factor} \\ \text{(corrected)} \end{array} = \frac{\begin{array}{l} \# \text{ times your} \\ \text{work is cited} \end{array} - \begin{array}{l} \# \text{ citations that} \\ \text{actually trash} \\ \text{your work} \end{array} - \begin{array}{l} \# \text{ times} \\ \text{you cited} \\ \text{yourself} \\ \text{(nice try)} \end{array} \dots}{\begin{array}{l} \# \text{ times you were} \\ \text{cited just to pad} \\ \text{the introduction} \\ \text{section} \end{array} - \begin{array}{l} \# \text{ citations the editor} \\ \text{pressured the} \\ \text{author to include to} \\ \text{increase the jour-} \\ \text{nal's impact factor} \end{array}} \\ + \begin{array}{l} \# \text{ original} \\ \text{articles you've} \\ \text{written} \end{array} + \begin{array}{l} \# \text{ articles you were} \\ \text{included in out of} \\ \text{pity or politics} \end{array} \\ + \begin{array}{l} \# \text{ not-so-original} \\ \text{articles you've} \\ \text{~~written~~} \\ \text{copied and pasted} \end{array}$$



Good Luck!!!