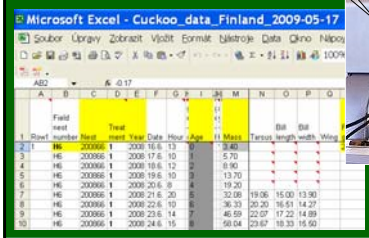
# Desatero pravidel psaní (odborného) textu


Re: Ethology - ETH-08-0089
BES: your user account modified
Re: Ethology - ETH-08-0089
revision submitted - ETH-08-0089.R1
Evolution - Account Modified in Manuscript Central
Re: Ethology - ETH-08-0089
Ethology - ETH-08-0089
Ethology - Account Modified in Manuscript Central
Evolution - Ms. 08-0431
FW: Biology Letters - Decision on Manuscript ID RS...

Tomáš Grim

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Univerzita Palackého, Olomouc

# Odb(p)orné šlamastyky

„Perifyton poskytuje daleko lepší útlum rychlosti proudění vody než makrofyta. Hodnota snížené rychlosti proudění vody prostřednictvím perifytonu je většinou stejná ve srovnání s hodnotou snížené rychlosti proudění vody prostřednictvím makrofyt, kde tato hodnota může být odlišná.“



„Za hlavní zdroj potravy v horních tocích se považuje detritus až po toky V. řádu. V V. - VI. řádech převažují řasy jako hlavní zdroj potravy. Určitou výjimku tvoří řasy, zatím není známo do jaké míry je zoobentos schopen je trávit.“

Z cyklu „Šílenství“

# Odb(p)orné šlamastyky

**ABSTRAKT**

Tato bakalářská práce je literární rešerší shrnující dosavadní informace o proudění vody a o jeho vlivu na ekosystém vodního toku. Dále shrnuje informace o významu submerzní vegetace v tekoucích vodách a o vlivu proudění na submerzní vegetaci. Rešerše uvádí také poznatky o významu organického materiálu v tekoucích vodách, jeho původu a velikostní struktuře. Zdůrazňuje význam organického materiálu jako základního zdroje energie pro zoobentos. Dále se práce zabývá vlivem proudění na zoobentos, který osídluje minerální a organický substrát, a u jehož jednotlivých zástupců je vyvinuta řada adaptací pro život v tekoucích vodách. Zdrojem těchto informací jsou především články z mezinárodních vědeckých časopisů.

Z cyklu „Šílenství“

# Následky...

Nutno říct, že autorka si v této druhé verzi bakalářské práce dala podstatně více práce především z gramatikou a stylistickým zpracováním, přesto se však v textu vyskytuje řada neobratných až nesmyslných formulací, které mnohde pramení z nepochopení problematiky. Přestože seznam literatury čítá přes 90 položek, velká část citovaných údajů je z nepůvodních zdrojů, z monografií a učebních textů. Rešerše je sice logicky utříděna do kapitol podle jednotlivých dílčích témat (proudění vody, organické látky, makrofyta, zoobentos), ale přináší jen minimum nových informací, které by nastolily otázky pro další výzkum.

Z posudku

# Odb(p)orné šlamastyky

pravidlo marginality

**Tab. 4.** Význam jednotlivých faktorů prostředí na celkový počet druhů nočních motýlů na studovaných lesních fragmentech v okolí Měňan.

| Faktor | df | Deviance | Resid. Df | Resid. Dev. | F | Pr(>F) |
|---|---|---|---|---|---|---|
| NULL | | | 51 | 259,32 | | |
| *Typ vegetace* | 5 | 86,961 | 46 | 172,359 | 6,8221 | 0,0001812 *** |
| *poly(vzd. od kraje,2)* | 3 | 50,314 | 43 | 122,045 | 6,5785 | 0,0013113 ** |
| *poly(plocha,2)* | 3 | 27,566 | 40 | 94,480 | 3,6042 | 0,0013113 ** |
| *poly(konektivita.5,3)* | 3 | 5,032 | 37 | 89,447 | 0,6580 | 0,5837695 |
| *obvod* | 1 | 1,761 | 36 | 87,687 | 0,6906 | 0,4119220 |
| *poměr* | 1 | 2,846 | 35 | 84,841 | 1,1163 | 0,2983907 |
| *orientace* | 1 | 1,728 | 34 | 83,113 | 0,6778 | 0,4162688 |
| *sklon* | 1 | 0,313 | 33 | 82,800 | 0,1227 | 0,7283859 |

Charakteristika modelu: quasipoisson, link: log

V kategorii „*všechny druhy*" ve vztahu k diverzitě, byl určující parametr prostředí *konektivita* a *vzdálenost od okraje fragmentu* (Tab. 5.). Ostatní testované faktory prostředí jsou statisticky nevýznamné. Nejlepší kombinace faktorů vysvětlující druhovou diverzitu je: „diverzita ~ *poly(konektivita0.5,3)* + *poly(vzd.od.kraje,2)* + *obvod* + *poměr*" (R-squared: 0, 3068)

**Tab. 5.** Význam jednotlivých faktorů prostředí pro diverzitu všech motýlů v okolí Měňan.

| Faktor | df | Deviance | Resid. Df | Resid Dev | F | Pr(>F) |
|---|---|---|---|---|---|---|
| NULL | | | 51 | 3.2869 | | |
| poly(konektivita.5,3) | 3 | 0,65690 | 48 | 2,6300 | 4,5399 | 0,009021 ** |

Z cyklu „Standard"

# Co je opravdu podstatné?

- jak se vyhnout tvorbě paskvilů?

- výchozí předpoklad:
- konkrétní pravidla $\not\rightarrow$ obecné principy
- **obecné principy** $\rightarrow$ konkrétní pravidla

zdravý selský rozum☺

## Konkrétní doporučení - paušálně?

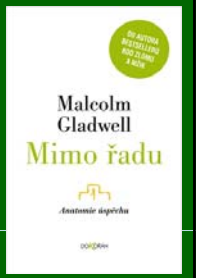
| optimální | slov |
|---|---|
| název | 10–12 |
| abstrakt | 200 |
| rukopis | 6 000 |
| věta | 15–20 |
| odstavec | 150 |

## Co je opravdu podstatné?

- otázka ***přístupu***
- způsoby myšlení
- konkrétní *praktická* pravidla, ale i ...
- metapravidla – neopakovat se, krok stranou

- „talent od narození“ vs. realita
- pravidlo 10 000 hodin

„Nejjistější pomůcka k psaní je trochu lepidla na mé židli.“ (A. Trollope)




zdravý selský rozum☺

# Co je opravdu podstatné?

When you first arrive, read and think widely and exhaustively for a year.

S. C. Stearns

- Jak se naučit psát? Hodně *číst*!!!
- *ne* sběr dat, analýzy, psaní apod.!

1. znalost oboru – co a jak se řeší?
2. inspirace – co budu já řešit?
3. „infikace“ vědeckým stylem psaní
4. jak dlouhá má být věta?
5. jak má vypadat tabulka?

http://www.yale.edu/eeb/stearns/advice.htm

# Co je opravdu podstatné?

Assume that everything you read is bullshit until the author manages to convince you that it isn't. S. C. Stearns

- kritické myšlení
- *sebe*reflexe – co se mi čte dobře?
- *sebe*kritika – co jsem napsal za b...

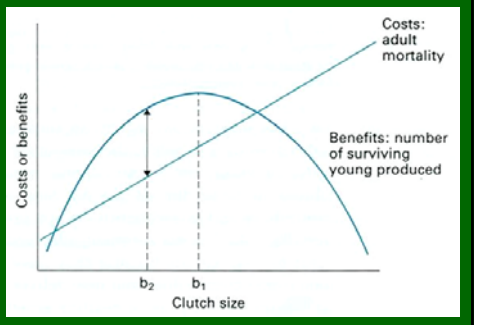

Reakcí na špatnou práci u nás bývá často mlčení, nebo dokonce vychválení (hendikepující dědictví komunistické éry). První přístup škodí pasivně, druhý aktivně. Bez kritické reflexe chyb v cizí i vlastní práci se opakovaným chybám nelze vyhnout.

Grim 2011: Tichodroma

# Co je opravdu podstatné?

- Paretův princip
- 80 % důsledků pramení z 20 % příčin
- plánování a rozdělení práce

- optimalizace
  - ➢ vzorek
  - ➢ angličtina
  - ➢ statistika - základy!
  - ➢ pečlivost




zdravý selský rozum☺

# Co je opravdu podstatné?

- umění přesvědčit ...
- ... kolegy, redaktory, recenzenty, sponzory ...

AN EQUILIBRIUM THEORY OF INSULAR ZOOGEOGRAPHY

ROBERT H. MACARTHUR[1] AND EDWARD O. WILSON[2]

It is not sufficient to have a good idea; it is even more important to develop and publicize it. Munroe and MacArthur and Wilson had the same basic idea. Munroe, distracted by other interests and perhaps frustrated in his initial attempts to publish, allowed his idea to languish. MacArthur and Wilson vigorously pursued and advocated their idea, and had a major impact on their science.

(Excerpted and modified from Brown and Lomolino 1989.)

Brown & Lomolino 1998: Biogeography. 2nd ed. (s. 373)

# Recenzní řízení

| | 1 (No) | 2 | 3 | 4 | 5 (Yes) |
|---|---|---|---|---|---|
| 1. Does the Ms contain enough original material? | ○ | ○ | ○ | ○ | ○ |
| 2. Is the topic suitable for ***Behavioral Ecology & Sociobiology***? | ○ | ○ | ○ | ○ | ○ |
| 3. How do you rate its novelty value? | ○ | ○ | ○ | ○ | ○ |
| 4. Is the theoretical reasoning sound? | ○ | ○ | ○ | ○ | ○ |
| 5. Is the order of presentation logical? | ○ | ○ | ○ | ○ | ○ |
| 6. Are all statistical tests applied correctly? (if applicable) | ○ | ○ | ○ | ○ | ○ |
| 7. Are all the figures and tables necessary? | ○ | ○ | ○ | ○ | ○ |
| 8. Do the conclusions follow from the data? | ○ | ○ | ○ | ○ | ○ |
| 9. Is the literature adequately reviewed? | ○ | ○ | ○ | ○ | ○ |
| 10. Does the paper read well? | ○ | ○ | ○ | ○ | ○ |
| 11. Are there problems with animal ethics? | ○ | | | | |


| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| How would you rate the overall scholarly merit and presentation of this manuscript? | ○ | ○ | ○ | ○ | ○ |

| req Recommendation | |
|---|---|
| ○ | Accepted as is |
| ○ | Accepted, subject to minor revisions |
| ○ | Substantially revised (major revision) |
| ○ | Rejected, and resubmitted with new reviewing process |
| ○ | Rejected |

Behav. Ecol. Sociobiol.

# Recenzní řízení

| Please complete the following (when necessary use the appropriate comment boxes to expand on your answers): | Yes | No | N/A |
|---|---|---|---|
| req Title, abstract and introduction- are these appropriate and informative? | ◉ | ○ | |
| req If the manuscript is an original contribution, has the material it describes been published previously? | ○ | ○ | |
| req Is the language clear, logical, concise and direct? | ○ | ○ | |
| req Are the figures of sufficiently high technical standard, appropriate and necessary? | ○ | ○ | ○ |
| req Are any additional figures required? | ○ | ○ | |
| req Colour plates: is it essential that they are in colour? (NB authors may bear the cost) | ○ | ○ | ○ |
| req Is the length of the paper justified? | ○ | ○ | |
| req Should some sections be rearranged, expanded or condensed? | ○ | ○ | |
| req Have you any ethical concerns about this paper, e.g. regarding animal experimentation, human studies or conservation issues? | ○ | ○ | |

| req Quality of the paper: |
|---|
| ○ Outstanding paper of the highest international importance |
| ○ Excellent paper, making an important contribution to the field |
| ○ Good paper, worth publishing in Biol J Linn Soc |
| ○ Good paper, but not appropriate (i.e. sufficiently evolutionary) for Biol J Linn Soc |
| ○ Paper may be acceptable after major revision |
| ○ Paper is worthwhile, but of insufficient interest, quality or importance |
| ○ Paper contains errors in experimental method, analysis or logic: should not be published |

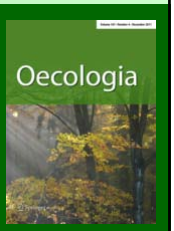

| req Recommendation | |
|---|---|
| ○ | Accept |
| ○ | Minor Revision |
| ○ | Major Revision |
| ○ | Reject & Resubmit |
| ○ | Reject |

Biol. J. Linn. Soc.

# Recenzní řízení

| Assessment of Innovation and General Appeal: |
|---|
| ○ Manuscript represents innovative contribution of broad interest |
| ○ Manuscript represents innovative contribution of limited appeal |
| ○ Manuscript is largely confirmatory and of general interest |
| ○ Manuscript is largely confirmatory and of only specialized interest |
| ○ Manuscript is limited in scope and appeal |

| Recommendation | |
|---|---|
| ○ | Excellent manuscript, recommend publication (only very minor revisions required) |
| ○ | Good manuscript, needs minor to moderate revision, followed by a re-evaluation by the Handling Editor |
| ○ | Potentially Acceptable manuscript, but a major revision is needed, with re-assessment by external reviewers |
| ○ | Reject but allow resubmission (a substantially revised manuscript with assessment by external reviewers may be considered) |
| ○ | Reject and do not allow resubmission |




Oecologia

# Recenzní řízení

SCIENCE ONLINE SCIENCE MAGAZINE HOME SCIENCE NOW NEXT WAVE STKE/NIDS/SAGE SCIENCE CAREERS E-MARKETPLACE

Science *ScienceReferee*

Click 1 for instructions on reviewing this manuscript.

**Please enter your Evaluation for manuscript number :**
**Title:**

Please enter your evaluation in the boxes below. Comments to be sent to the author and a checked rating and recommend review using a separate word processor, save it, then paste your review into the boxes below. For security, we have implen to continue using the site or send your review after that time (you will have to exit and log in again). To paste your review i **"edit/paste"** on the menu above. If you do type your review in here, please copy it first and save it elsewhere before sendi an acknowledgement if we have successfully received your review. **Maximize the screen if you don't see a scroll bar.**

| Overall Evaluation (Required) | Recommended Action (Required) |
|---|---|
| ○ Excellent and Exciting | ○ Publish w/o Delay |
| ○ Above Average | ○ Publish with minor revisions |
| ○ Mediocre or Poor | ○ Not highest priority |
| ○ Too Specialized | ○ Needs re-review after revisions |
| | ○ Reject |


*The final selection is based on relative quality of papers rather than absolute merit and is constrained by available space in Science and our commitment to balance subject matter.*

Science

# Vřele doporučeno ke čtení!

Stearns S. C. 1987: Some Modest Advice for Graduate Students.
http://www.yale.edu/eeb/stearns/advice.htm

Thompson J. N. 2005: On being a successful graduate student in the sciences.
http://bio.research.ucsc.edu/people/thompson/StudentSuccess.pdf

Klein J. 1998: Vláda průměrnosti. Vesmír 77: 48–49, 107–109.
http://www.vesmir.cz/clanek/vlada-prumernosti

Novotný V. 2000: Kargo kult, český vědecký. Vesmír 79: 284.
http://www.vesmir.cz/clanek/kargo-kult-cesky-vedecky

O'Connor R. J. 2000: Why ecology lags behind biology. Scientist 14: 35–37.

☺

# Několik prostých doporučení ...







http://www.yale.edu/eeb/stearns/advice.htm

## Několik prostých doporučení ...

- Always prepare for the worst
- Nobody cares about you
- You must know why your work is important
- Psychological problems are the biggest barrier
- Avoid taking lectures - they're usually inefficient
- Write a proposal and get it criticized

http://www.yale.edu/eeb/stearns/advice.htm

## Několik prostých doporučení ...

**Start Publishing Early.**

Don't kid yourself. You may have gotten into this game out of your love for plants and animals, your curiosity about nature, and your drive to know the truth, but you won't be able to get a job and stay in it unless you publish. You need to publish substantial articles in internationally recognized, refereed journals. Without them, you can forget a career in science. This sounds brutal, but there are good reasons for it, and it can be a joyful challenge and fulfillment. Science is shared knowledge. Until the results are effectively communicated, they in effect do not exist. Publishing is part of the job, and until it is done, the work is not complete. You must master the skill of writing clear, concise, well-organized scientific papers. Here are some tips about getting into the publishing game.

**Publish Regularly, But Not Too Much.**

The pressure to publish has corroded the quality of journals and the quality of intellectual life. It is far better to have published a few papers of high quality that are widely read than it is to have published a long string of minor articles that are quickly forgotten. You do have to be realistic. You will need publications to get a post-doc, and you will need more to get a faculty position and then tenure. However, to the extent that you can gather your work together in substantial packages of real quality, you will be doing both yourself and your field a favor.

Most people publish only a few papers that make any difference. Most papers are cited little or not at all. About 10% of the articles published receive 90% of the citations. A paper that is not cited is time and effort wasted. Go for quality, not for quantity. This will take courage and stubbornness, but you won't regret it. If you are publishing one or two carefully considered, substantial papers in good, refereed journals each year, you're doing very well - and you've taken time to do the job right.

http://www.yale.edu/eeb/stearns/advice.htm

## Publish or perish ► Publish & flourish

„Omlouvám se za tak dlouhý dopis, neměl jsem čas napsat kratší.“

(B. Pascal)

- nepublikované výsledky neexistují
- je mnoho způsobů psaní ... které nefungují

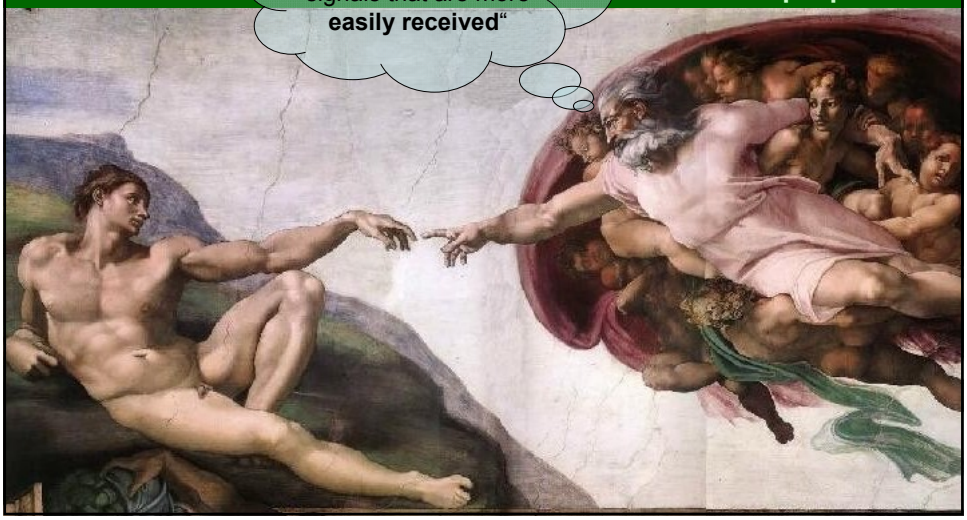
- následující platí (většinou) pro *jakýkoli* text!

## Leitmotiv – receiver psychology

nabídka

„Signallers will be selected to produce signals that are more **easily received**“

poptávka



# Autorství

- nejčastější příčina etických konfliktů
- vynucované autorství (šéf labu, ...)
- autorství je právo ... (benefit)
- ... a zodpovědnost! (cost)

**Statement on authorship.** Authorship of a paper carries with it responsibility as well as credit. All those whose names appear as authors should have played a significant role in designing or carrying out the research, writing the manuscript, or providing extensive guidance to the execution of the project. They should be able to present and defend the work in a public forum. Honorary authorship is to be avoided. All authors must be in agreement on both the submission and full content of any article carrying their names. Any violation of these conditions represents academic misconduct and will be dealt with accordingly.


# Autorství

- „autorský autismus“ *vs.* dělba práce
- autorství vs. „Poděkování“
- pořadí autorů

Authorship credit should be based only on substantial contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or revising it critically for important intellectual content; and on (c) final approval of the version to be published. Conditions (a), (b), and (c) must all be met. Participation solely in the acquisition of funding or the collection of data does not justify authorship. General supervision of the research group is not sufficient for authorship. Any part of an article critical to its main conclusions must be the responsibility of at least one author.

**Uniform requirements for manuscripts submitted to biomedical journals**

*International Committee of Medical Journal Editors*

ICMJE 1999: Med. Educ. (http://www.icmje.org/)

# Autorství

- myšlenky (hypotéza, design) *vs*. sběr dat

away from the states that were functional in a former ecological context.

I thank A. Lahti for aiding in the development of the project from the start and performing all field measurements; R. Payne for extensive



**Author Contributions**

Conceived and designed the experiments: CY WL YC SS FT AM ER BGS. Performed the experiments: CY WL YC SS. Analyzed the data: CY APM AA FF BGS. Wrote the paper: CY WL FT APM AA FF AM ER BGS.

Lahti 2005: PNAS

Yang et al. PLoS ONE 2010

# Autorství

- klíčový **první** autor (myšlenka, „první píše“)
- poslední – senior author (školitel)
- author for correspondence
- „vata“ mezi tím

*Nature* requires authors to specify the contribution made by their co-authors in the end notes of the paper (see section 5.5). If authors regard it as essential to indicate that two or more co-authors are equal in status, they may be identified by an asterisk symbol with the caption 'These authors contributed equally to this work' immediately under the address list. If more than three co-authors are equal in status, this should be indicated in the author contributions statement. Present addresses appear immediately below the author list (below the footnote rule at

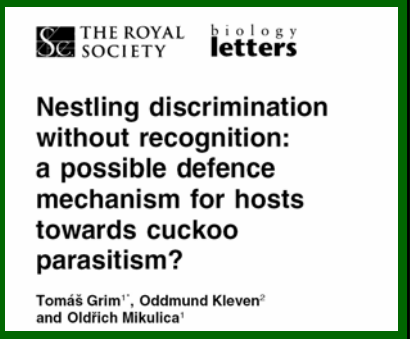
***Eight reasons why optimal foraging theory is a complete waste of time***

*G. J. Pierce and J. G. Ollason, Culterty Field Station, Univ. of Aberdeen, Newburgh, Ellon, Aberdeenshire AB4 OAA, Scotland (no significance is to be attached to the order of the authors' names)*

Pierce and Ollason 1987: Oikos

# Význam výsledků

- autoři **přeceňují** význam své práce
  - až 95% MS „rejected“

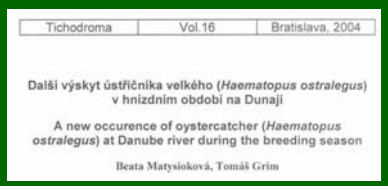




- autoři často **neví**, co jejich data říkají:
  - Živa 1993 *vs.* Proc. R. Soc. 2003

Dlouhodobé pozorování vědců a sebereflexe☺

# Význam výsledků

- např. obyčejné pozorování:
- kos na zahradě ► mlčet
- ústřičník na Dunaji ►




- lelek bělokřídlý ►


- datel knížecí ►

## Co chci sdělit?

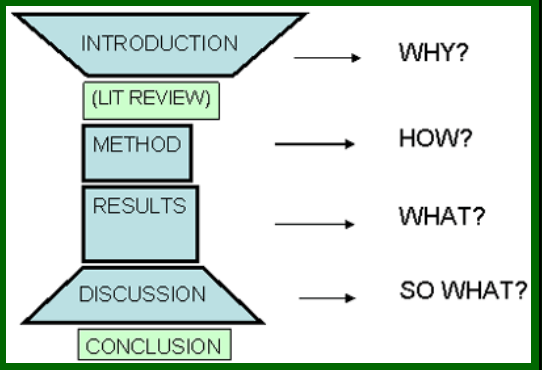
- take-home message

- „Who cares?“ – Koho to bude zajímat?
- „So what?“ – Proč je to zajímavé?
- „zatím nevíme ...“
- ... nic☺


Day & Gastel 2006: How to write and publish scientific paper. G. Press.

## IMRAD – pořadí částí

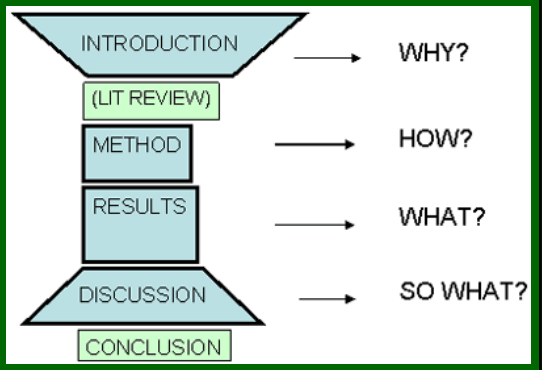
- Title
- Authors
- Abstract
- **I**ntroduction
- **M**ethods
- **R**esults
- **D**iscussion
- Acknowledg(e)ments
- References




O’Connor 1991: Writing Successfully in Science. Routledge.

## IMRAD *vs*. pořadí psaní!

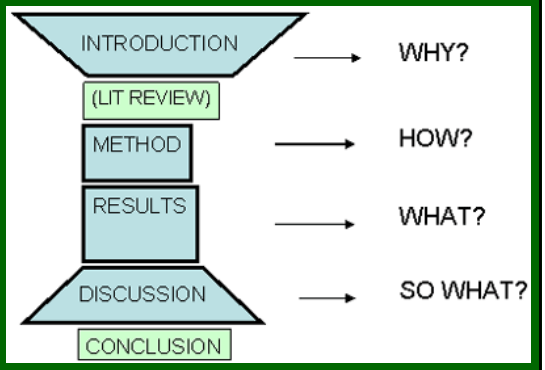
6. Title
- Authors
5. Abstract
4. Introduction
1. Methods
2. Results
3. Discussion
- Acknowledg(e)ments
7. References




O'Connor 1991: Writing Successfully in Science. Routledge.

## IMRAD *vs*. pořadí čtení!

1. Title
- Authors
2. Abstract
5. Introduction
6. Methods
3. Results (Fig...)
4. Discussion
- Acknowledg(e)ments
7. References




O'Connor 1991: Writing Successfully in Science. Routledge.

# Logické pořadí a hierarchie témat

- Introduction
  - Chick growth
  - Chick survival
- Methods
  - Chick growth
  - Chick survival
- Results
  - Chick growth
  - Chick survival
- Discussion
- ...

◄ příklad☺

O'Connor 1991: Writing Successfully in Science. Routledge.

# Efekt(iv)ní název

NEST MONITORING DOES NOT INCREASE NEST PREDATION IN OPEN-NESTING SONGBIRDS: INFERENCE FROM CONTINUOUS NEST-SURVIVAL DATA

KAREL WEIDINGER[1]

Begging intensity of nestling birds varies with sibling relatedness

JAMES V. BRISKIE[1]†, CHRISTOPHER T. NAUGLER[2] AND SUSAN M. LEECH[2]

The evolution of nestling discrimination by hosts of parasitic birds: why is rejection so rare?

Tomáš Grim*

**Experimentally Constrained Virulence is Costly for Common Cuckoo Chicks**

Tomáš Grim*, Jarkko Rutila†, Phillip Cassey‡ & Mark E. Hauber§¶

Listování časopisama

# Efekt(iv)ní název

Drdová L. & Hampl R. : Potenciální hnízdní predátoři vodních ptáků a metody jejich zjišťování

Kverek P., Storchová R., Reif J. & Nachman M. W. : Výskyt křížence slavíka obecného (*Luscinia megarhynchos*) a slavíka tmavého (*Luscinia luscinia*) na území České republiky potvrzen genetickou analýzou

Strachoňová Z. : Hnízdní biologie pěvců v urbánním prostředí města Olomouce

Kopij G. : Hnízdní hustota a výběr hnízdního prostředí rorýse obecného (*Apus apus*) ve Vratislavi

Matysioková B. & Tobółka M.: Co ovlivňuje délku pobytu v teritoriu po vyhnízdění u čápa bílého (*Ciconia ciconia*)?

Zárybnická M.: Cirkadiánní aktivita sýce rousného (*Aegolius funereus*) v hnízdních norách: efekt rozdílných rodičovských rolí

Hořák D. & Klvaňa P.: Osvojení cizího vejce během parazitační události u poláka chocholačky (*Aythya fuligula*)

Kondělka D. & Petro R.: Prvé známé případy prokázaného hnízdění jeřába popelavého (*Grus grus*) na Moravě a ve Slezsku

Sylvia 2008

# Efekt(iv)ní název

- maximální stručnost

- **balast**:
  - „Studie...“
  - „Pozorování...“
  - „*Významný* vliv...“
  - (lokalita)
  - čas
  - (*modelový* taxon)
- **klíčová slova**:
  - experimentální
  - důkaz
  - první (hnízdění ...)
  - vliv
  - rozdíl
  - nový (*vs*. replikace!)

O’Connor 1991: Writing Successfully in Science. Routledge.

# Abstrakt

- ≠ summary!
- abstrakt = zkrácená verze článku
- mini-úvod, (metodika), výsledky, implikace
- max. 200 (250, 300) slov
- délka: 1. submitace vs. finální verze!


- klíčová slova

Internet: veřejně přístupné abstrakty článků

# Abstrakt – klíčová slova + příběh!

**Experimental evidence for chick discrimination without recognition in a brood parasite host**

Recognition is considered a critical basis for discriminatory behaviours in animals. Theoretically, recognition and discrimination of parasitic chicks are not predicted to evolve in hosts of brood parasitic birds that evict nest-mates. Yet, an earlier study showed that host reed warblers (*Acrocephalus scirpaceus*) of an evicting parasite, the common cuckoo (*Cuculus canorus*), can avoid the costs of prolonged care for unrelated young by deserting the cuckoo chick before it fledges. Desertion was not based on specific recognition of the parasite because hosts accept any chick cross-fostered into their nests. Thus, the mechanism of this adaptive host response remains enigmatic. Here, I show experimentally that the cue triggering this 'discrimination without recognition' behaviour is the duration of parental care. Neither the intensity of brood care nor the presence of a single-chick in the nest could explain desertions. Hosts responded similarly to foreign chicks, whether heterospecific or experimental conspecifics. The proposed mechanism of discrimination strikingly differs from those found in other parasite–host systems because hosts do not need an internal recognition template of the parasite's appearance to effectively discriminate. Thus, host defences against parasitic chicks may be based upon mechanisms qualitatively different from those operating against parasitic eggs. I also demonstrate that this discriminatory mechanism is non-costly in terms of recognition errors. Comparative data strongly suggest that parasites cannot counter-evolve any adaptation to mitigate effects of this host defence. These findings have crucial implications for the process and end-result of host–parasite arms races and our understanding of the cognitive basis of discriminatory mechanisms in general.

**Keywords:** brood parasitism; coevolution; discrimination; mechanism; recognition

Grim 2007: Proc. R. Soc. Lond. B

## Abstrakt – údernost & vzbuzení zájmu

- teorie vs. data
- pravidlo „3“

**Calling at a cost: elevated nestling calling attracts predators to active nests**

Tonya M. Haff* and Robert D. Magrath

*Research School of Biology, Australian National University, Canberra, Australia*
**Author for correspondence (tonya.haff@anu.edu.au).*

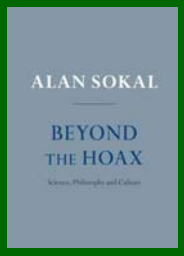
Begging by nestling birds has been used to test evolutionary models of signalling but theory has outstripped evidence. Eavesdropping predators potentially impose a cost on begging that ensures signal honesty, yet little experimental evidence exists for such a cost at active nests because the use of artificial nests, long playback bouts and absence of parents may have exaggerated costs. We broadcast short periods (1 h) of either nest-

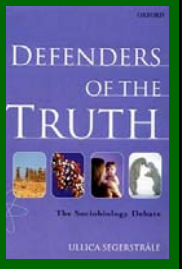
have detected predators. This study confirms a present-day cost of nestling begging, demonstrates that this cost can be incurred over short periods and supports the importance of parent–offspring antipredator strategies in reducing predation risk.

Haff & Magrath 2011: Biol. Lett.

## Abstrakt – různá slova = různé úkoly!

- hledání: (((cuckoo) bird) animal) + recogn*
- klíčová slova se opakují!




- funkce slov:
  - ➢ informovat (desertion, begging, ...)
  - ➢ přilákat (recognition template, ...)
  - ➢ manipulovat (striking, crucial, enigmatic,...)

Grim 2009: Web Ecol.

# Úvod

- proč je to zajímavé?
- co už víme?
- co nevíme a *chceme* vědět?

- obecné ► konkrétní
- běžné ► vzácné
- starší ► novější

- obecný problém *vs*. konkrétní taxon

Číst publikovanou literaturu (nejen) z oboru ► „background“

# Úvod

- začátek: ne *modelový* druh!
- obecné řeči
- délka ~ téma

1. odstavec – 7 vět,
100 slov (bez citací),
ø = 14 slov/větu

délka vět (slova)

9
21

Jaenike, J. (1990) Host specialization in phytophagous insects. *Annual Review of Ecology and Systematics*, **21**, 243–273.

9
15

Ruxton, G.D., Sherratt, T.N. & Speed, M.P. (2004) *Avoiding Attack. The Evolutionary Ecology of Crypsis, Warning Signals and Mimicry*. Oxford University Press, Oxford, UK.

10
16

20

Davies, N.B. (2000) *Cuckoos, Cowbirds and Other Cheats*. T & AD Poyser, London, UK.

**Introduction**

Resource use lies at the heart of ecological research. Common and easily accessible resources (prey for predators or hosts for parasites) should be, all other things being equal, used frequently (Jaenike 1990). Still, some apparently accessible and suitable resources remain unexploited. Absence of resource use can be explained by various factors, such as inconspicuousness or unpalatability (Ruxton, Sherratt & Speed 2004). Such avoidance of cryptic or aposematic prey is easily explained. In contrast, avoidance of common, conspicuous, easily accessible and nonaposematic resources presents a real ecological conundrum. Here, we combine comparative and experimental approaches to study a particularly striking example of nonuse of an apparently suitable resource.

Absence of brood parasitism in potential hosts was previously explained mostly by inaccessible nests and unsuitable diet for parasite chicks (Davies 2000). In general, little effort has been made to explain the absence (Peer & Bollinger 1997) or low rates of parasitism (Briskie, Sealy & Hobson

Grim et al. 2011: J. Anim. Ecol.; Grim 2012: Živa

## Úvod

- *poslední* odstavec/ce:
  - ➢ jakou hypotézu testujeme?
  - ➢ co predikujeme?
  - ➢ efekt: směr, kvantita

- ➢ „… whether there is *any* difference …“
- ➢ „... we predicted correlation ...“ 

Číst publikovanou literaturu (nejen) z oboru ► „background“

## Metodika

- kdy? (měsíce, roky)
- kde? (koordináty)
- jak?

- **replikovatelnost**

Sutherland et al. 2004: Bird Ecology and Conservation. Oxford.

## Metodika

- délka zobáku = ?
- hatching day = day 0 (nebo 1?)
- sepsat než jdete do terénu!

... a mnohé další metodické příručky

## Metodika – statistika

- explanatory variables
- response variables
- confounding variables

- *fixed effects*: treatment, ...
- *covariates*: date in season (centred within year), quadratic term (interakce), ...
- *random effects*: population, year (nominal!), nestling id, brood id, (nested effects)

Grafen and Hails 2002: Modern statistics for the life sciences. Oxford UP

# Výsledky

- co potřebuje čtenář vědět?

Table 5. Tests of the relationship between nestling age and effect size for four nestling traits. Negative parameter (regression coefficient) means that the correlation between egg size and nestling trait decreases as the young grow older. The body mass model included interaction between predictor (egg size or parental quality) and chick age. All other tests were only based on egg size as a predictor. See text for further details. $F$ = test statistic, NDF = numerator degrees of freedom, DDF = denominator degrees of freedom, S.E. = standard error.

| Nestling trait | $F$ | NDF | DDF | $N$ | $P$ | Parameter | S.E. |
|---|---|---|---|---|---|---|---|
| Survival | 0.73 | 1 | 75.8 | 204 | 0.396 | −0.000380 | 0.000445 |
| Body mass | 14.16 | 1 | 524 | 539 | <0.001 | | |
| Skeletal size | 14.41 | 1 | 93.3 | 111 | <0.001 | −0.00490 | 0.00129 |
| Wing/feather length | 0.14 | 1 | 116 | 120 | 0.708 | 0.000752 | 0.00201 |

Krist 2011: Biol. Rev.

# Výsledky

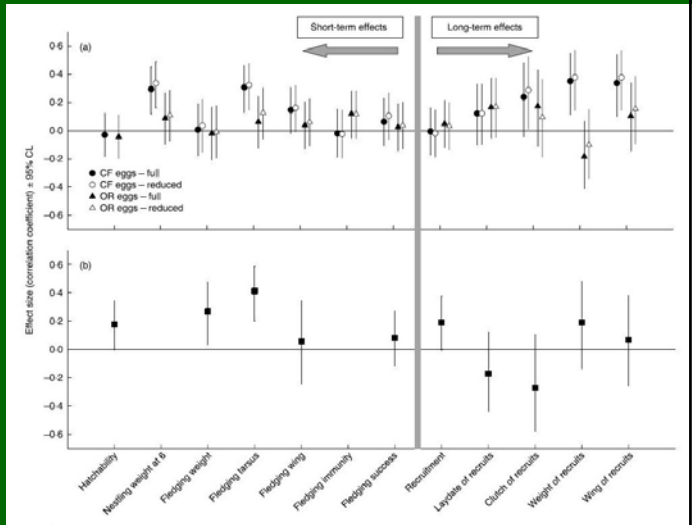



Fig. 1. Effect sizes corresponding to relationships between egg size and offspring traits. The sign of the presented effects corresponds to the sign of statistical covariation between egg size and dependent variables. The exception is the egg-size effect on laying date, where a statistically negative effect means a biologically positive effect. The sample size used for computation of effect size can be inferred from degrees of freedom of the particular test (Table S1). (a) Effects obtained in the cross-fostering experiment. The effect sizes from full and reduced models are compared. The latter models do not include the parental mid-value and feeding frequencies among predictors. Labels 'CF eggs' and 'OR eggs' denote size of the cross-fostered egg (i.e. an egg from which chicks actually hatch) and original egg (i.e. an egg originally laid on the territory) respectively. (b) Effect sizes obtained from the sets of unmanipulated nests.

Krist 2009: JAE

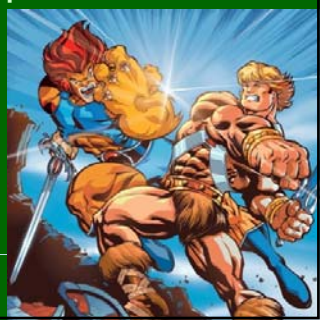
## Výsledky

- pořadí významnosti výsledků
- velikost efektu *vs*. P-hodnoty
- „estimate ± S.E.“ (S.D.)
- směr rozdílu (trendu)
- *vs*. grafy a tabulky (redundance)
- přesné P-hodnoty (*ne* N.S., P>0.05)
- %, poměry (lépe než syrová data!)
- *ne*-interpretovat!
- prezentovat i data proti oblíbené hypotéze

Anderson et al. 2001: J. Wildl. Manage.

## Diskuze

- 1. odst. shrnutí – co nového *a* zajímavého?
- posl. odst. – implikace, omezení & co dál?
- konkrétní ► obecné (*opak* Úvodu!)
- rozlišit fakta *vs*. spekulace
- *ne* statistika, nové výsledky apod.
- stat. *vs*. biol. významnost



Dawkins *kontra* Gould

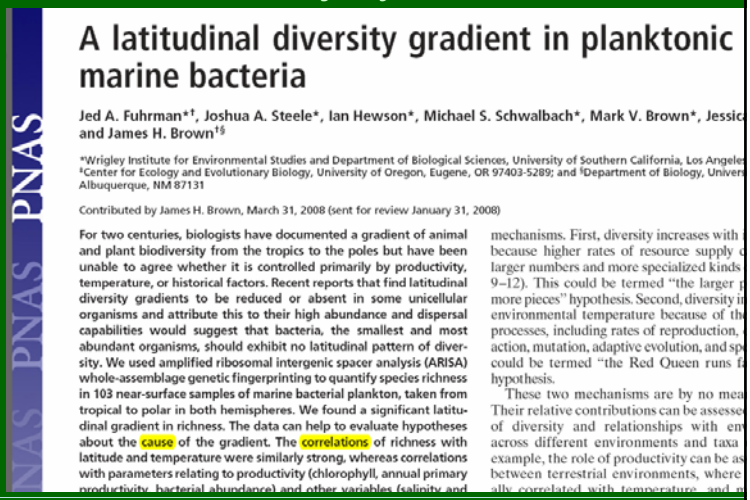
# Diskuze

- neznalost předešlých studií
- kritičnost: zjistili opravdu autoři to, co tvrdí?
- „pře-interpretace“
- náročnost inter. v ekologii
- zpětné vazby apod.


☺

# Diskuze

- kauzální vs. korelativní jazyk



PNAS PNAS PNAS

## A latitudinal diversity gradient in planktonic marine bacteria

Jed A. Fuhrman*†, Joshua A. Steele*, Ian Hewson*, Michael S. Schwalbach*, Mark V. Brown*, Jessic
and James H. Brown†§

*Wrigley Institute for Environmental Studies and Department of Biological Sciences, University of Southern California, Los Angele
†Center for Ecology and Evolutionary Biology, University of Oregon, Eugene, OR 97403-5289; and §Department of Biology, Univers
Albuquerque, NM 87131

Contributed by James H. Brown, March 31, 2008 (sent for review January 31, 2008)

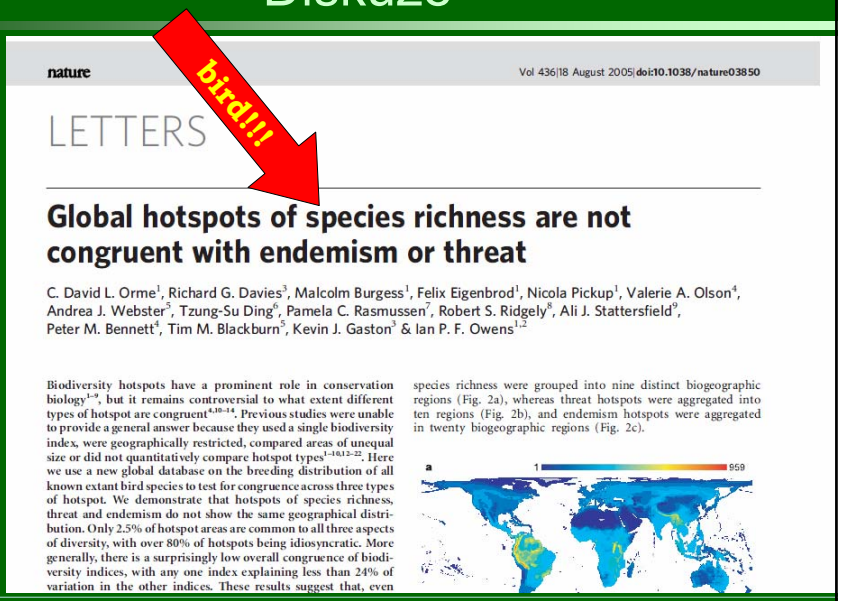
For two centuries, biologists have documented a gradient of animal and plant biodiversity from the tropics to the poles but have been unable to agree whether it is controlled primarily by productivity, temperature, or historical factors. Recent reports that find latitudinal diversity gradients to be reduced or absent in some unicellular organisms and attribute this to their high abundance and dispersal capabilities would suggest that bacteria, the smallest and most abundant organisms, should exhibit no latitudinal pattern of diversity. We used amplified ribosomal intergenic spacer analysis (ARISA) whole-assemblage genetic fingerprinting to quantify species richness in 103 near-surface samples of marine bacterial plankton, taken from tropical to polar in both hemispheres. We found a significant latitudinal gradient in richness. The data can help to evaluate hypotheses about the cause of the gradient. The correlations of richness with latitude and temperature were similarly strong, whereas correlations with parameters relating to productivity (chlorophyll, annual primary

mechanisms. First, diversity increases with
because higher rates of resource supply
larger numbers and more specialized kinds
9–12). This could be termed "the larger
more pieces" hypothesis. Second, diversity i
environmental temperature because of th
processes, including rates of reproduction,
action, mutation, adaptive evolution, and sp
could be termed "the Red Queen runs
hypothesis.

These two mechanisms are by no mea
Their relative contributions can be assesse
of diversity and relationships with en
across different environments and taxa
example, the role of productivity can be as
between terrestrial environments, where

Fuhrman et al. 2008: PNAS

# Diskuze




Orme et al. 2005: Nature

# Poděkování

- *vs*. autorství

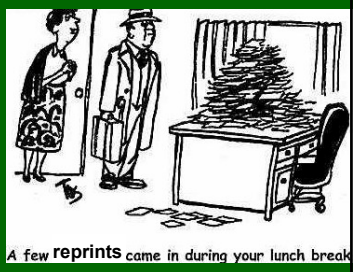
- ano: pomoc technická, *jen* sběr dat
- ne: rutinní laboratorní, úřednická práce

- kdo komentoval rukopis
- kdo výzkum financoval (čísla grantů)
- kdo výzkum povolil – etika, licence
- díky (anonymním) recenzentům!

http://www.icmje.org/

# Literatura

- zdroje zastaralé / ne přesně k tématu
- necitovat: diplomky, abstrakty, ...
- přehlédnutí významných studií




- chybné citace – formát

➢necitovat z druhé ruky!

- chybné citace – obsah (25% v ekologii!!!)

➢necitovat naslepo nebo dle abstraktů!

Todd et al. 2007: Oikos

# Literatura

- 25% citací v ekologii:
  "ambiguous", "not support", "empty“

Oikos 116: 1599–1601, 2007
doi: 10.1111/j.2007.0030-1299.15992.x,

Subject Editor: Per Lundberg, Accepted 27 June 2007

Horizons

**Citing practices in ecology: can we believe our own words?**

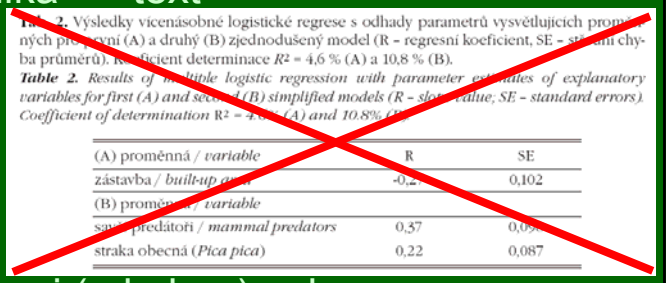
**Peter A. Todd, Darren C. J. Yeo, Daiqin Li and Richard J. Ladle**

*P. A. Todd (dbspat@nus.edu.sg), D. C. J. Yeo and D. Li, Dept of Biological Sciences, Natl Univ. of Singapore, 14 Science Drive 4, SG-117543 Singapore, Singapore. – R. J. Ladle, Oxford Univ. Centre for the Environment, Dyson Perrins Building, South Parks Road, Oxford, OX1 3QY, UK.*

Peer-reviewed articles are the foundation of modern four groups by a majority decision (Table 1). At all

# Obrazové přílohy

- graf > tabulka >> text



Výsledky vícenásobné logistické regrese s odhady parametrů vysvětlujících proměnných pro první (A) a druhý (B) zjednodušený model (R – regresní koeficient, SE – standardní chyba průměrů). Koeficient determinace $R^2$ = 4,6 % (A) a 10,8 % (B).

***Table 2.*** *Results of multiple logistic regression with parameter estimates of explanatory variables for first (A) and second (B) simplified models (R – slope value; SE – standard errors). Coefficient of determination* $R^2$ = 4.6% (A) and 10.8% (B)

| (A) proměnná / *variable* | R | SE |
|---|---|---|
| zástavba / *built-up area* | -0,2 | 0,102 |
| (B) proměnná / *variable* | | |
| savci predátoři / *mammal predators* | 0,37 | 0,09 |
| straka obecná (*Pica pica*) | 0,22 | 0,087 |

- ptejte se sami (a kolem) sebe:
  - ➢ je příloha *samostatně* srozumitelná?
  - ➢ je příloha nezbytná?

„Less is more.
And when in doubt – delete.“
(Mark E. Hauber)

Matthews & Matthews 2008: Successful scientific writing. Cambridge UP.

# Jak nemá vypadat tabulka?

| Sp. | Přežilo (n) | Přežilo (%) | Sežráno (n) | Sežráno (%) | Celkem | chi | P |
|---|---|---|---|---|---|---|---|
| Drozd | 1 | 33.33 | 2 | 66.67 | 3 | 0,171 | 0.6788 |
| *Kos* | 2 | 66.7 | 1 | 33.33 | 3 | 0,2 | NS |
| Pěnkavy | 9 | 90.00 | 1 | 10.00 | 10 | 1.13 | *** |
| Ost. | ... | ... | ... | ... | ... | ... | *** |

Tab. 1: Jak přežívala hnízda?

- desetinná místa vs. přesnost měření & biologická smysluplnost
- nekonzistentní formátování
- redundance, nejasnosti, opakování informací

Matthews & Matthews 2008: Successful scientific writing. Cambridge UP.

# Jak (ne)má vypadat tabulka?

**Tabulka 1** Rozdíly v hmotnostech (průměr ± S.E.) mláďat drobných pěvců v různých prostředích. Data pro mláďata ve věku 5 dnů (den líhnutí = den 0). Detaily viz Metodika.

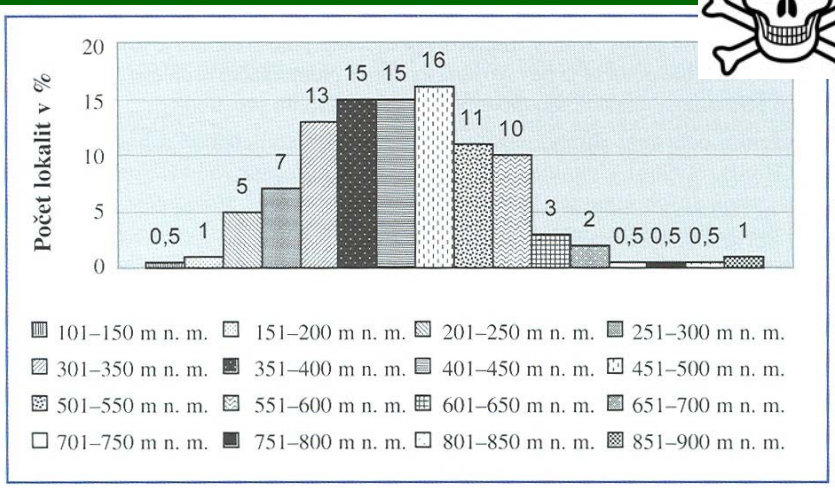
| Druh | Hmotnost (g) | | t | P |
|---|---|---|---|---|
| | Město | Vesnice | | |
| Kos černý | 23,0 ± 12,5 | 13,9 ± 3,3 | 4,39 | <0,001 |
| Drozd zpěvný | 28,7 ± 30,1 | 29,1 ± 18,7 | 0,11 | 0,36 |
| Pěnice … | … | … | … | … |

Tab. 1 Jak se liší růst ptáků?

| Sp. | | g | % |
|---|---|---|---|
| Kos | Město | 22,98 ± 12,52 | 6 |
| | Vesnice | 13,85 ± 3,3 | 1 |
| | P | <0,001 | |
| | t | 4,39 | |
| | | mm² | % |
| Drozd | Město | 28,66± 30,11 | 8 |
| | Vesnice | 29,11 ± 18,66 | 8 |
| | P | n.s. | |
| | t | - | |
| Pěnice | Město | 12,658 ± 0,54 | 5 |
| | Vesnice | 10 ± 1,589754 | 4 |
| | t | | |
| | P | | |

Ze smyšleného nepublikova(tel)ného rukopisu

# Jak nemá vypadat graf?




Graf 1: Nálezy mihule potoční v České republice podle nadmořské výšky (n = 275), HANEL (2004)

Hanel & Lusk 2005: Ryby a mihule České republiky. ČSOP, Vlašim

# Jak nemá vypadat graf?

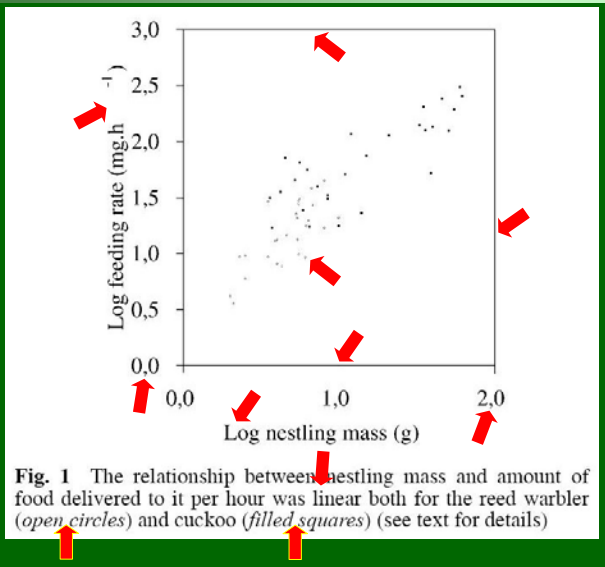



**Fig. 1** The relationship between nestling mass and amount of food delivered to it per hour was linear both for the reed warbler (*open circles*) and cuckoo (*filled squares*) (see text for details)

Grim & Honza 2001: Behav. Ecol. Sociobiol.

# Jak má vypadat graf?

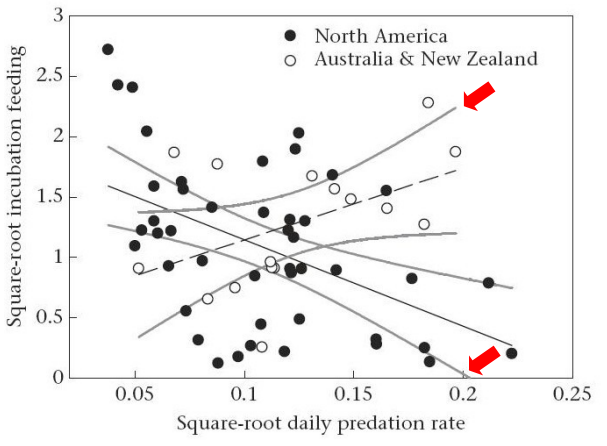



**Figure 3.** Relationship of the rate of incubation feeding (per hour of observation) to daily nest predation rate across species and regions ($N = 60$), with 95% confidence intervals around regression lines.

Matysioková et al. 2011: Anim. Behav.

# Jak má vypadat graf?

- osy
- popisky
- jednotky
- vysvětlivky

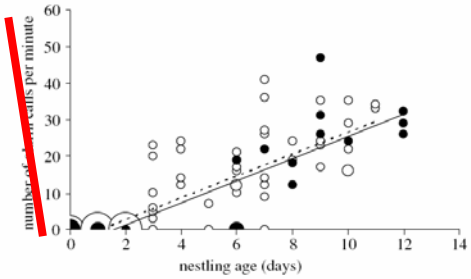



Figure 2. Alarm calling rate (churrs per minute) of one parent reed warbler in response to a human observer near the nest increased with nestling age ($F_{1,107} = 204.36$, $p < 0.0001$), but did not differ between nests containing broods of reed warbler nestlings (open circles, dashed regression line) and those with a cuckoo nestling (solid circles, solid regression line; $F_{1,107} = 0.099$, $p = 0.75$). Day 0 is day of hatching. The smallest symbol refers to one observation and the area of the larger symbols is directly proportional to the sample size (for largest, $n = 15$). Data from 24 nests with a cuckoo nestling and 86 nests with a reed warbler brood, with one observation per nest.

Davies et al. 2006: Proc. R. Soc. Lond. B

# Jak má vypadat graf?

- specifické požadavky konkr. časopisů!


**Figures should not be boxed (superfluous bounding axes) and tick marks must be on the inside of the axes.** Where possible, figures should fit on a single page in the submitted paper. In a final version they will generally be reduced in size by about 50% during production. Wherever possible, they should be sized to fit into a single column width (c. 70mm final size). To make best use of space, you may need to rearrange parts of figures (e.g. so that they appear side by side). Please ensure that symbols, labels, etc. are large enough to allow reduction to a final size of c. 8 point, i.e. capital letters will be about 2 mm tall. Lettering should use a sans serif font (e.g. Helvetica and Arial) with **capitals used for the initial letter of the first word only. Bold lettering should not be used.** Units of axes should appear in parentheses after the axis name. Please note that line figures should be at least 600 dpi and half-tones (photos) should be at least 300 dpi.

Zanette et al. 2010: J. Anim. Ecol.

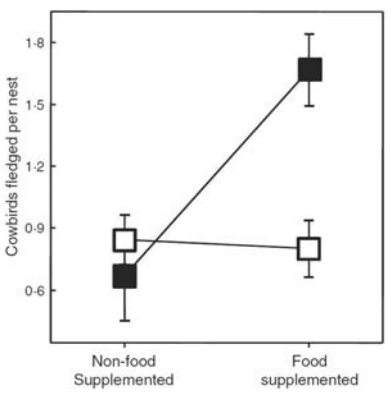



**Fig. 2.** Effects of food addition and multiple cowbird parasitism on the number of cowbirds fledged per nest fledging young. Food supplemented refers to sparrow territories provided with added food, as compared to non-food supplemented territories. Open symbols = singly parasitized nests (i.e. containing just one cowbird egg), filled symbols = multiply parasitized nests (i.e. containing two or more cowbird eggs). Values are means ± SE.

# Jak má vypadat graf?

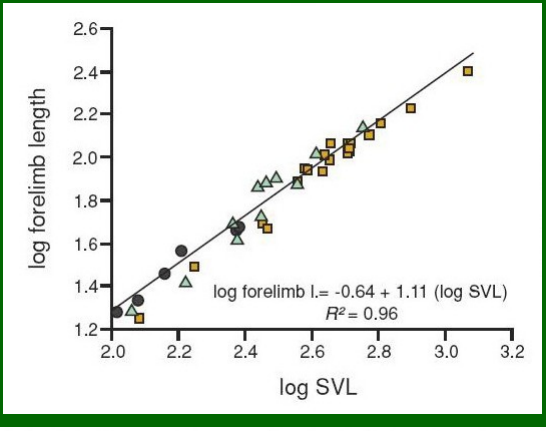



**Figure 3.** Scaling of morphological traits in *Varanus*. Data are species values for log-transformed morphological traits and SVL, but the scaling relationships depicted are based on phylogenetic reduced major axis regressions of traits on size (see Materials and Methods for details). $R^2$ is the proportion of variation in species values for a trait that is explained by the regression of that trait on size. Colored symbols denote habitat categories: orange squares are terrestrial, green triangles are arboreal, and gray circles are rock-dwelling species.

Collar et al. 2011: Evolution

# Jak má vypadat graf?

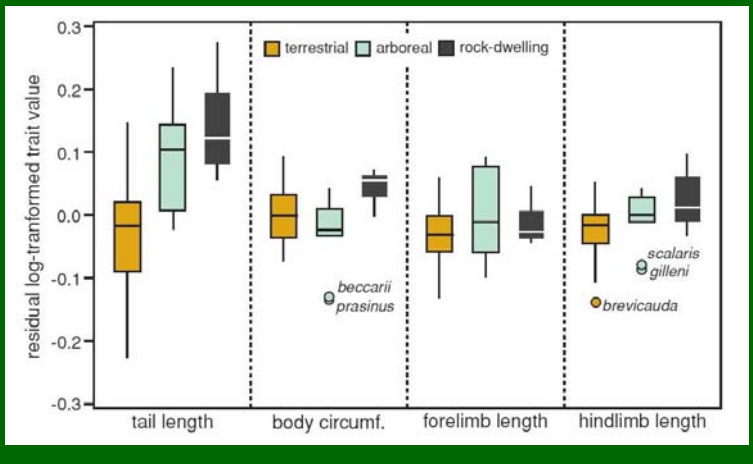



**Figure 4.** Boxplots for species' size-corrected morphological traits in each of the three habitat categories. Whiskers are standard, extending to the 9th and 91st percentile of the distributions. Labeled points are species values falling outside of this range. Colors correspond to habitat states: orange is terrestrial, green is arboreal, and gray is rock-dwelling.

Collar et al. 2011: Evolution

# Jak má vypadat graf?

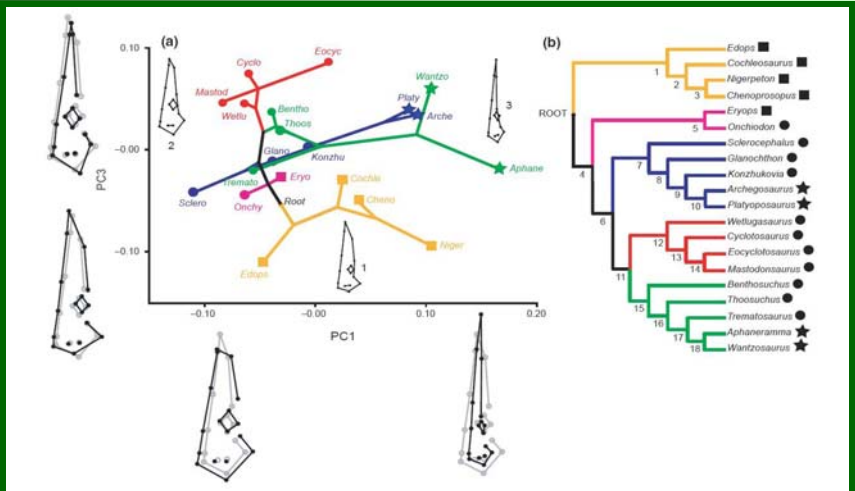



**Fig. 3** (a) First and Third PCs of the Principal Component Analysis with the phylogeny plotted. (b) Simplified cladogram for temnospondyls based on Ruta *et al.* (2007). Stars: fully aquatic feeders, circles: amphibious feeders, squares: terrestrial feeders. The mean shape for each lifestyle was obtained from the Procrustes superposition, 1: terrestrial feeders, 2: amphibious feeders, 3: fully aquatic feeders.

Fortuny et al. 2011: J. Evol. Biol.

# Jak má vypadat graf?

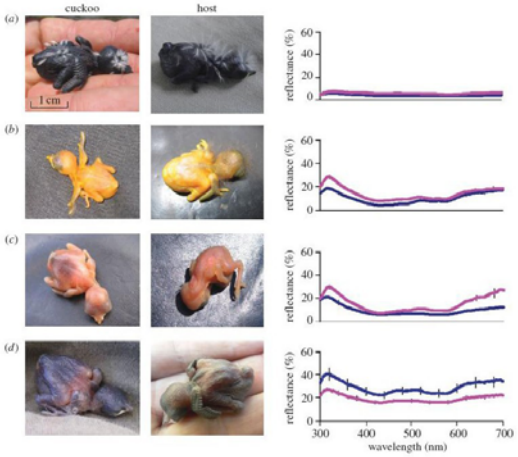
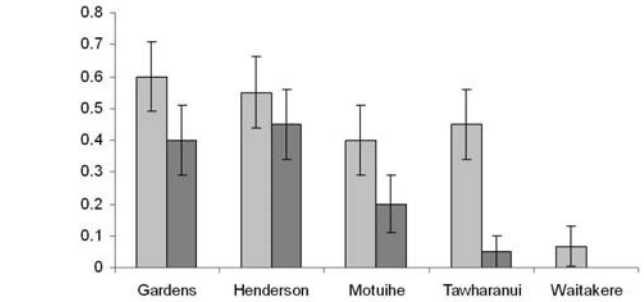



Figure 1. Representative photographs and mean ± s.e. reflectance of the skin of nestling bronze-cuckoos (blue lines) and their hosts (pink lines). (*a*) Little bronze-cuckoo ($n = 10$) and large-billed gerygone ($n = 12$). (*b*) Shining bronze-cuckoo ($n = 8$) and yellow-rumped thornbill ($n = 5$). (*c*) Horsfield's bronze-cuckoo ($n = 11$; photo illustrates a pale individual) and superb fairy-wren ($n = 17$). (*d*) We also include a second host of Horsfield's bronze-cuckoo ($n = 4$; photo illustrates a dark individual), the purple-crowned fairy-wren *M. coronatus* ($n = 8$), to illustrate some of the variation in nestling colour among malurid hosts.

biologicky relevantní info (ptáci – UV-světlo)

Langmore et al. 2011: Proc. R. Soc.

# Jak nemá vypadat popiska grafu?




12

13 **Figure One: Nest predation, as a proportion of total nests, subdivided by nest size for the**

14 **artificial nest dataset. Light bars denote small artificial nests; dark bars denote large**

15 **artificial nests. Error bars are +/- 1SE under a canonical binomial distribution.**

16

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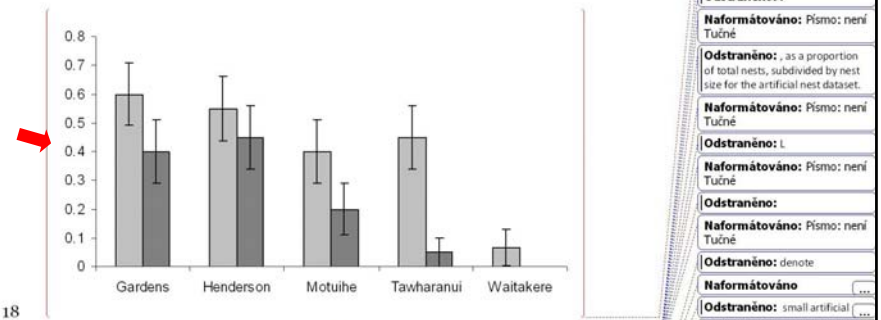
# Jak má vypadat popiska grafu?




18

19 **Figure 1** Nest predation estimates (mean±S.E.) for small (light bars) and large artificial nests

20 (dark bars) across study sites. Estimates are from XX short descripiton of stat. model XX.

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**Odstraněno:** denote
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**Odstraněno:** small artificial
**Naformátováno**
**Naformátováno:** zvýrazněné
**Odstraněno:** denote large
**Naformátováno**

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# Jak nemá vypadat popiska tabulky?

Table Two: Tracking tunnel records for each site. A y in a given column denotes that that species' marks were found in at least one tracking tunnel in the site, whereas an n denotes that the species was not recorded in any of the tunnels left at the site.

| | Weta | Mice | Rats | Hedgehogs | Other mammals |
|---|---|---|---|---|---|
| Tawharanui | y | y | n | n | n |
| Henderson | y | y | y | y | y |
| Gardens | n | y | y | y | y |
| Motuihe | y | n | n | n | n |
| Waitakere | y | n | n | n | n |

No difference was seen in overall rates of predation between real and artificial nests (z=1.08, p=0.28), and overall rates of predation were lower in sites with mice

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# Jak má vypadat popiska tabulky?

the findings is presented in Table Two.

Table 2 Presence ("y") vs. absence ("n") of predators across study sites. Data from tracking tunnels.

| | Weta | Mice | Rats | Hedgehogs | Other mammals |
|---|---|---|---|---|---|
| Tawharanui | y | y | n | n | n |
| Henderson | y | y | y | y | y |
| Gardens | n | y | y | y | y |
| Motuihe | y | n | n | n | n |
| Waitakere | y | n | n | n | n |

No difference was seen in overall rates of predation between real and artificial nests (z=1.08, p=0.28), and overall rates of predation were lower in sites with mice only than in sites with all mammals (z=2.08, p=0.0380). However, analysis comparing rates of predation on real nests and large artificial nests in sites with all

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**Komentář:** extremely redundant text☺
**Odstraněno:** records for each site. A "y" in a given column denotes that that species' marks were found in at least one tracking tunnel in the site, whereas an "n" denotes that the species was not recorded in any of the tunnels left at the site
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rukopis

# Formát & styl

# Formát & styl

**How to write consistently boring scientific literature**

Fig. 1. "*Congratulations, you are now capable of writing technical, impersonal and boring papers like myself and the other gentlemen – welcome to Academia*". Drawing by Sverre Stein Nielsen.

Sand-Jensen 2007: Oikos

# Formát & styl

- věda ≠ beletrie – pište:
  - ➢ jasně (*vs*. „květnatost“)
  - ➢ jednoznačně
  - ➢ bez odboček
  - ➢ gramaticky správně
  - ➢ rozlišujte podstatné a ne...
  - ➢ stručně (souvětí!)
  - ➢ opakování termínů nevadí!
  - ➢ ... a pozor na jazyk:

Williams 1995: Style. Toward clarity and grace. Chicago UP.

# Bizarní příběh o mlžojedovi

- *Xenoturbella bocki* (1949)
- ploštěnka? sumýš? samostatný kmen?
- molekulára ➲ je to mlž! (ostatně má mlží vajíčka a larvy!)

**New light on the enigmatic *Xenoturbella* (phylum uncertain): ontogeny and phylogeny**

Olle Israelsson[?]

enteropneust, or a unique representative of a plesiomorphic phylum. I report here the previously unknown embryology of *Xenoturbella* that unequivocally corroborates a bivalve relationship and thus once and for all dismisses the potential new phylum. The simplicity of the adult *Xenoturbella* is due to

- co to ale je onen sekundární méně nápadný signál na elektroforéze?

***Xenoturbella* is a deuterostome that eats molluscs**

Sarah J. Bourlat[1], Claus Nielsen[2], Anne E. Lockyer[3], D. Timothy J. Littlewood[3] & Maximilian J. Telford[1]

Israelsson 1999: Proc. R. Soc.; Bourlat et al. 2003: Nature

## Celkové poučení

- u každého kroku práce:
- benefits = ?
- costs = ?

- forma: jasná, jednoznačná, stručná
- obsah: zajímavý, nový, inspirující
- kritika: neberte si ji osobně
- celkově: dělejte vše, jak nejlépe dovedete

☺