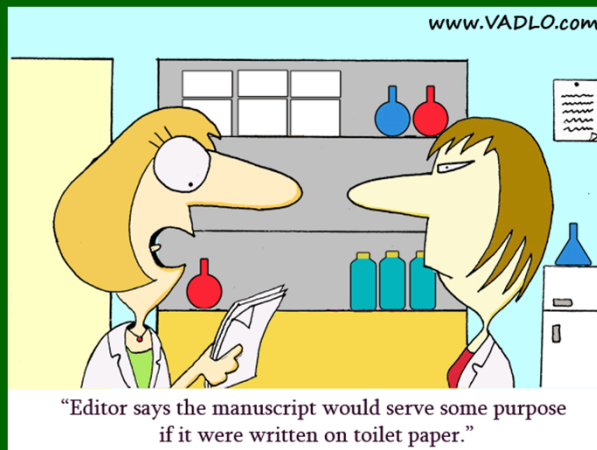


Jak psát odborný text

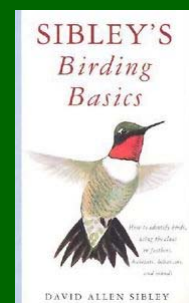


Tomáš Grim

Univerzita Palackého, Olomouc

Jak se učit?

"Analyzing your mistakes and those of others can be very enlightening. ... denying your mistakes will only ... cause problems in the long run."



Co je opravdu podstatné?

- jak se vyhnout tvorbě paskvilů?
 - jaká doporučení v příručkách?
 - typografie „-,-,—,...“
 - 5°C vs. 5 °C
 - kvůli tomu vám rukopis nevyhodí!
-
- konkrétní pravidla → obecné principy
 - **obecné principy** → konkrétní pravidla



zdravý selský rozum©

(Ne)praktická doporučení

- k čemu příklady z nereálného světa?

206 *How to Write and Publish a Scientific Paper*

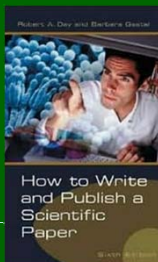
MOTTOES TO LIVE BY

Here are a few important concepts that all readers of this book should master. They are, however, expressed in typical scientific jargon. With a little effort you can probably translate these sentences into simple English:

1. As a case in point, other authorities have proposed that slumbering canines are best left in a recumbent position.
2. An incredibly insatiable desire to understand that which was going on led to the demise of this particular *Felis catus*.
3. There is a large body of experimental evidence which clearly indicates that members of the genus *Mus* tend to engage in recreational activity while the feline is remote from the locale.

If you had trouble with any of the above, here are the jargon-free translations:

1. Let sleeping dogs lie.
2. Curiosity killed the cat.
3. When the cat's away, the mice will play.



Praktická doporučení

- smysl mají jen příklady z reálného světa:

Ne, nebyli jsme v nadpřirozených výšinách, tkvěli jsme ve skutečnosti, v rozmaru přírody, že by úchvatnější nedokázaly vykouzlit ani nejpohádkovější bytosti, nadané nejpůsobivější čaromocí. Přivandroval sem jednou jistý exaktní vědec se speleologickými sklony, zanalyzoval líbeznost tohoto divu, rozpitval jeho soulad, rozložil jeho půvab na prvočinitele. Tvrdí, že *Grotta Azurra* není duch Krásy, uvězněný v podzemní kobce, nýbrž „rezultát akce solární iluminace, jež penetruje submarinní extenzivní perforací v perpendikuláře kaverny, disperzuje a jest totálně deprivováno elementů spektra kromě ultramarínového, které infiltruje a iluminuje interiér monopolně lazurem transparentního charakteru. Zablokování submersní perforace by mělo za konsekvenci existenci obskurní subterénní lokality“ — a Sirény by bez nadpřirozeného osvětlení ani nepípaly.



... reál až na příštím slajdu©

Praktická doporučení

- smysl mají jen příklady z reálného světa:

Abstract

The colorful appearance of bird eggshells has long fascinated ~~ornithologists and~~ evolutionary biologists alike. Considerable research effort has been conducted on the basic biochemistry of avian eggshell matrix, and the presence of tetrapyrrole porphyrin relatives was identified nearly a century ago.

Komentář [g2]: "ornithologists" in the first sentence of abstract suggests that this should better go into an avian rather than more general journal – I hope we agree that the latter outlet is preferable:-)

The colourful appearance of bird eggshells has long fascinated biologists and considerable research effort has focused on the structure and biochemistry of the avian eggshell matrix. The presence of tetrapyrrole pigments was identified nearly a century ago. Surprisingly, how the concentrations of avian eggshell pigments vary among related

Cassey et al. 2012: Biol. J. Linn. Soc.

Praktická doporučení

Introduction

Biological pigments are conspicuous products of metabolism and subserve a variety of physical, physiological, and behavioural functions (Cott 1940). Identifying the causes and functions of colourful phenotypic variation is a principal model system for understanding the evolution of trait diversity in modern evolutionary ecology (Hubbard et al. 2010). The varied and often colourful appearance of bird eggshells constitutes a fascinating, and poorly understood aspect of avian reproductive investment (Wallace 1889; Lack 1958; Kilner 2006). Among birds, the majority of species share similar (white) background eggshell colours (Cassey et al. 2010). Where variability in visible eggshell coloration does

Komentář [g3]: Q: this is almost exactly the same sentence as the starting sentence of Cassey et al PLoS ONE 2010 and BES 2010 too... Some of following sentence are just minor variations on sentences in those previous papers too... Why not start like:

From veneer bright blue egg of the great tinamou to calligraphic lines on murre egg, the bewildering variation in color, maculation and surface layout of avian eggs inspired humans both aesthetically and scientifically (Purcell et al. 2008) ...

Or something like that ☺

INTRODUCTION

From the glossy bright blue egg of the great tinamou (*Tinamus major*) to the calligraphic lines on a common murre (*Uria aalge*) egg, the striking colours

and maculation of avian eggs continue to inspire humans both scientifically (Cassey *et al.*, 2010b) and aesthetically (Purcell, Hall & Corado, 2008). Identifying the causes and functions of colourful phenotypic variation is a principal model system for understand-

Cassey et al. 2012: Biol. J. Linn. Soc.

Konkrétní doporučení - paušálně?

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

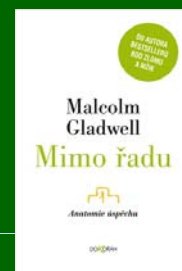


Co je opravdu podstatné?

- 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
- *sebereflexe* – co se mi čte dobře?
- *sebekritika* – 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

Ke čtení a zamyšlení

FORUM

ROZHOVOR

O vědcích a pivech

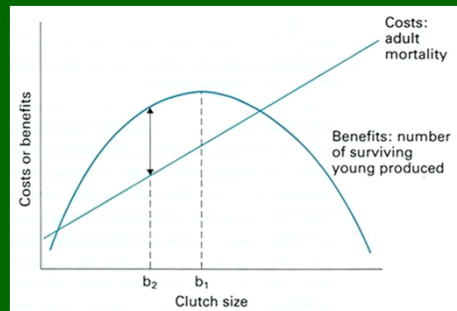
V předním mezinárodním ekologickém odborném časopise Oikos byla v r. 2008 publikována práce doc. RNDr. Tomáše Grima, Ph.D. z katedry zoologie a ornitologické laboratoře Přírodovědecké fakulty Univerzity Palackého v Olomouci o možném vlivu společenské aktivity na publikační činnost ekologů. Na tom by zdánlivě nebylo nic neobvyklého, kdyby nešlo o vědecký časopis a kdyby výzkum T. Grima neměl podtext recese, protože statisticky hodnocenou společenskou aktivitou bylo – pít piva. Výsledkem proto byla kritika od některých českých odborníků za údajné znevažování české vědy, na druhé straně ale tato práce získala pozitivní ohlas ve světě a v r. 2008 byl její autor nominován na cenu Ignáce Nobela, fiktivního bratra Alfréda. Ta bývá udělována za podobná netradiční témata vědeckého bádání.



Živa 2009

Co je opravdu podstatné?

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



zdravý selský rozum©; Taborsky 2010: Ethology

Optimalizace



Budiž pochválen malý přehledný nepořádek! Dá se udržet po řadu dnů, zatímco pořádek nelze udržet ani několik hodin.

M. Horníček

„Už to mám skoro hotové...“

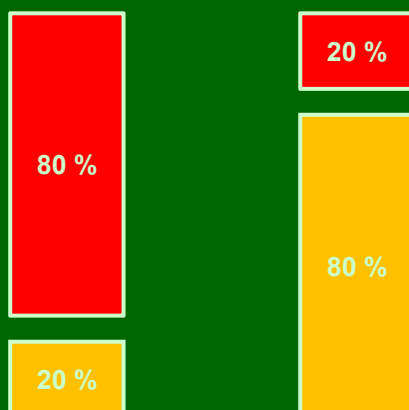
PONDĚLÍ	ÚTERÝ	STŘEDA	ČTVRTEK	PÁTEK	SOBOTA
6 ^h	6 ^h	6 ^h	6 ^h	6 ^h	6 ^h
7 ^h	7 ^h	7 ^h	7 ^h	7 ^h	7 ^h
8 ^h	8 ^h	8 ^h	8 ^h	8 ^h	8 ^h
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- plánování práce
- kdy submitovat rukopisy k PhD?
- *min.* 1 rok před plánovanou obhajobou!

Trojčlenka vs. realita

Paretovo pravidlo („80/20“)

vynaložený čas → výsledky



Vilfredo Pareto

Naivní očekávání vs. realita

Jediná správná odpověď?

- příklad: co prezentovat?
- MAM (minimum adequate model)?
- full model?
- něco mezi?



Behav Ecol Sociobiol (2011) 65:47–55
DOI 10.1007/s00265-010-1038-5

ORIGINAL PAPER

Cryptic multiple hypotheses testing in linear models: overestimated effect sizes and the winner's curse

Wolfgang Forstmeier · Holger Schielzeth

We followed backward elimination of nonsignificant terms, starting with the interaction term, then covariates and we kept two major fixed effects of interest (geography, dummy/egg type) in the models until the last step regardless of their significance (Grafen & Hails 2002). Additionally, in another series of analyses, we removed all covariates and confirmed that the interaction was nonsignificant even when covariates were not present in the models.

Grim et al. 2011: J. Anim. Ecol. ↗

Kompromisy & pluralita

WHY ARE BIRDS' EGGS COLOURFUL? 667

Table 4. PGLS models for the maximum-likelihood phylogenetic hypothesis test of variables putatively associated with increases in the concentration (nmol g⁻¹) of the eggshell pigments protoporphyrin IX and biliverdin

	Full model			Final model			Trees
	Estimate (SE)	t	P	Estimate (SE)	t	P	
Protoporphyrin IX	Adjusted R ² = 0.630			Adjusted R ² = 0.787			
(Intercept)	1.516 (0.368)	4.124	0.000	1.451 (0.185)	7.828	0.000	
Biliverdin log ₁₀ (nmol g ⁻¹)	0.420 (0.131)	3.208	0.003	0.596 (0.103)	5.776	0.000	1000
Maculation (0, 1)	0.557 (0.089)	6.276	0.000	0.600 (0.073)	8.187	0.000	1000
Eggshell thickness (nm)	-1.628 (0.521)	-3.127	0.003	-0.878 (0.390)	-2.254	0.029	1000
Incubation length (days)	-0.009 (0.010)	-0.915	0.366				
Fledging period (days)	0.004 (0.003)	1.417	0.165				
Clutch size (eggs per brood)	-0.029 (0.027)	-1.056	0.298				
Cavity type (none vs. burrow/tree hole)	0.240 (0.153)	1.568	0.126	0.497 (0.157)	3.167	0.003	860
Nest type (ground vs. tree/cliff)	-0.146 (0.139)	-1.049	0.301	-0.359 (0.118)	-3.037	0.004	878
Parental care (bi- vs. uni-)	0.027 (0.190)	0.143	0.887				
Development (altricial vs. not altricial)	-0.139 (0.174)	-0.796	0.431				
High calcium diet (0, 1)	-0.062 (0.118)	-0.523	0.604				
Biliverdin	Adjusted R ² = 0.560			Adjusted R ² = 0.616			
(Intercept)	-0.034 (0.462)	-0.073	0.943	-0.061 (0.198)	-0.307	0.760	

Final models were confirmed by both forwards and backwards variable elimination and the contribution of changes to the model likelihood and AICc (corrected Akaike information criterion). The results presented are for the maximum clade credibility (MCC) tree. In addition, the number of trees (Trees) for which the variables in the final model are retained from 1000 randomly re-sampled phylogenies is also given. Variables in bold were retained (same direction of relationship) in models associated with an increase in pigment concentration, standardized by fragment surface area (1000 mm²). In no cases were any additional terms retained.

Cassey et al. 2012: Biol. J. Linn. Soc.

Proč je zásadní obsah *a* forma?

“A person can have the greatest idea in the world. But if that person can't convince enough other people, it doesn't matter.”

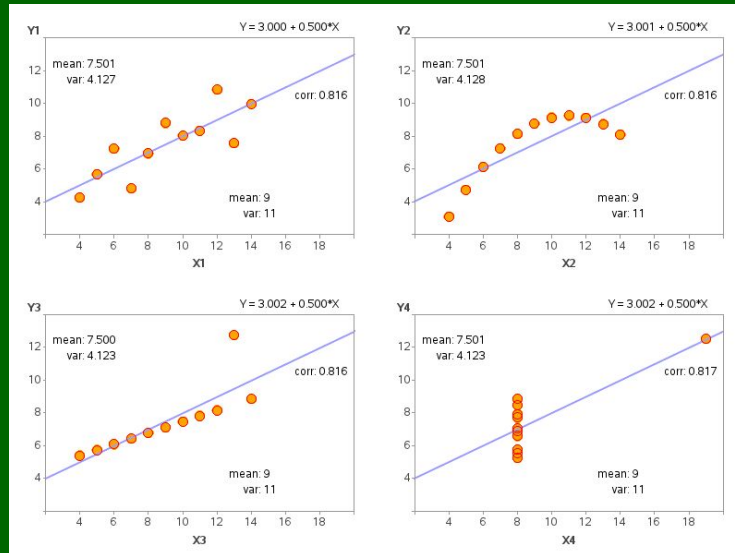


Gregory Berns

Forma ovlivňuje obsah 😊



Same, same, but completely different!



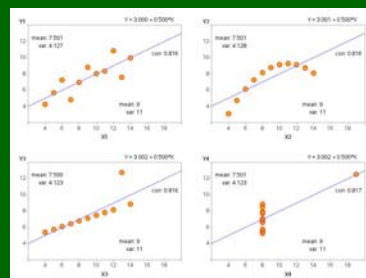
Anscombe 1973

Poučení

- “always show your data”
- explorační analýza dat
- odlehlé hodnoty (outliers)

• 3 nutné „kontroly“:

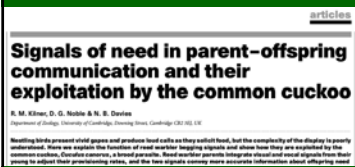
- linearita efektu
- normalita reziduálů = reziduí (residuals)
- homogenita variance



Anscombe's quartet

Zuur et al. 2010

Příklad



- nemístná extrapolace trendu
- pseudoreplikace
- nelinearita

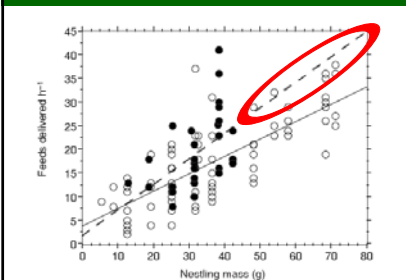


Figure 3 Relationship between nestling mass and feeding rate. The relationship between the mass of young in the nest and the number of feeds delivered per hour by both parents to the nest, for cuckoos (open circles, solid line, $n = 88$ observations of 36 different cuckoo chicks fed by 44 different pairs of hosts; some

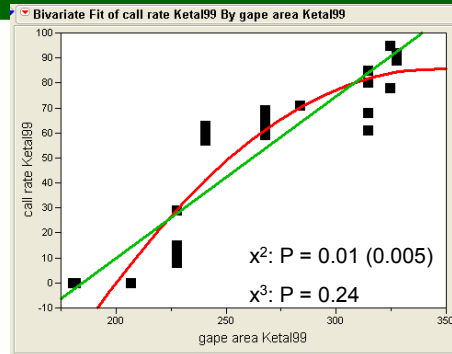


Figure 6 Comparison of observed and predicted begging call rates. Observed cuckoo begging call rate (open circles, solid line) is compared with the predicted cuckoo begging call rate (filled circles, dashed line) that should accompany the display of a particular gape area, assuming that reed warblers use the same rules to feed both a cuckoo nestling and their own young. Numbers refer to sample sizes of cuckoos measured at each age. Both lines increase significantly in relation to gape area ($F_{1,35} = 24.8$, $P < 0.0001$), but there is no significant difference between them in either their slope ($F_{1,35} = 0.018$, $P = 0.89$) or their elevation ($F_{1,35} = 0.77$, $P = 0.78$). Each predicted value corresponds to a particular day of the cuckoo's nestling period (from left to right, day 4–11, day 13 and day 15).

Co je opravdu podstatné?

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

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.

AN EQUILIBRIUM THEORY OF INSULAR ZOOGEOGRAPHY

ROBERT H. MACARTHUR¹ AND EDWARD O. WILSON²

(Excerpted and modified from Brown and Lomolino 1989.)

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

„Zdůvodněte, proč toto publikovat“

- „[for Nature] the cover letter is as important as the ms itself“ (anon.)
- ze submitačního formuláře (J. Anim. Ecol.):

In no more than 50 words, please explain what is novel and important about your paper that justifies publication in Journal of Animal Ecology.

For the first time, we combined comparative and experimental approaches to test all potential explanations for host avoidance in parasitic birds across multiple model host species. Major novel finding: hosts can be avoided by parasites due to interactions at nestling stage (as opposed to laying and incubation stages).

Grim et al. 2011: J. Anim. Ecol.

Přesvědčit: „cover letter“

Dear Editor,

Please find enclosed our ms entitled “Constraints on host choice in parasitic birds: why are European thrushes rarely parasitized by common cuckoos?” by Tomáš Grim, Peter Samaš, Csaba Moskát, Oddmund Kleven, Marcel Honza, Arne Moksnes, Eivin Røskoft, Bård G. Stokke for consideration for publication in *Journal of Animal Ecology*. All of the authors are aware of its submission.

In this study we examined an important issue in the field of animal ecology, host selection by parasitic birds, at an unprecedented scale. Specifically, virtually all previous studies of this fascinating phenomenon were based on (1) single model host species, (2) tested a single explanation (mostly high egg rejection rates), and/or (3) compared single pair of sympatric/allopatric host populations (thus, committing pseudoreplication *sensu* Hurlbert 1984). In contrast, we studied (1) several model host species, (2) tested multiple (more than 20) explanations, (3) included several spatial replicates of both sympatric and allopatric host populations, and, for the first time (4) combined comparative and experimental methods to the study of host selection in parasitic birds. Also, no previous study posed a question whether some factors *per se* might not constrain brood parasitism in potential hosts but that interactive effects of those factors might be important. Although we tested our multiple hypotheses on a specific model system (thrushes *Turdus* spp. vs. the European cuckoo *Cuculus canorus*) – just like any ecological or biological study –, our conclusions are also interesting for understanding of interspecific ecological relationships in general.

Přesvědčit: „rebuttal letter“

- vždy „... děkujeme za **pozitivní** odpověď...“
- „ano souhlasíme ... **ale** ...“
- nejdřív „+“, pak až „-“

In replying to the referees' comments, authors are advised to use language that would not cause offence when their paper is shown again to the referees, and to bear in mind that if a point was not clear to the referees and/or editors, it is unlikely that it would be clear to the nonspecialist readers of *Nature*.

Reviewer #2:

The study is interesting, but hard to read due to rather poor English language (a native English speaking person should go through the ms).

Answer: Thanks a lot. In fact, the language revision was done before submission to JAB by a native speaker, D. Campbell (mentioned in Acknowledgements also in the original version of the MS).

Neignorovat lidskou psychiku (= ješitnost, urážlivost, závist, blbost ...☺)

Přesvědčit: „rebuttal letter“

- → recenzent

3) Partial use of collected information is unwarranted. It is unclear why they have not tested the prediction that links cuckoo parasitism to host personality as they have collected the data. I think it is worth testing here if ... there exist a correlation between male trend to be polygynious and nest defense as this would add a very interesting angle to your study. ...

Response 5: We have already tested most of these hypotheses in the original MS.

Male mating status vs. nest defence: "Male contact rates also did not differ according to mating status of female ($R^2 = 0.05$, $F_{3,45} = 0.84$, $P = 0.48$) or male ($t_{47} = 1.58$, $P = 0.12$)" (l. 392–393 in orig. MS).

Parasitism status vs. nest defence: "Females at naturally parasitized nests showed statistically same nest defence levels (17.5 ± 1.7) as those at experimentally parasitized nests ($19.4 \pm$

- reagujeme na připomínky
- nereagujeme na recenzenta (nečetl MS pořádně, nezná relevantní literaturu a teorii, píše s překlepy ...☺)

... tj. opatrně, věcně, objektivně ☺

Recenzní řízení

	1 (No)	2	3	4	5 (Yes)
1. Does the Ms contain enough original material?	☐	☐	☐	☐	☐
2. Is the topic suitable for <i>Behavioral Ecology & Sociobiology</i> ?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐

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
REV Title, abstract and introduction - are these appropriate and informative?	☒	☐	☐
REV If the manuscript is an original contribution, has the material it describes been published previously?	☐	☐	☐
REV Is the language clear, logical, concise and direct?	☐	☐	☐
REV Are the figures of sufficiently high technical standard, appropriate and necessary?	☐	☐	☐
REV Are any additional figures required?	☐	☐	☐
REV Colour plates: is it essential that they are in colour? (NB authors may bear the cost)	☐	☐	☐
REV Is the length of the paper justified?	☐	☐	☐
REV Should some sections be rearranged, expanded or condensed?	☐	☐	☐
REV Have you any ethical concerns about this paper, e.g. regarding animal experimentation, human studies or conservation issues?	☐	☐	☐



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

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 ISSUE ETHS/ARDS/SAGE SCIENCE CAREERS E-HANDYPLACE

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 recommendation using a separate word processor, save it, then paste your review into the boxes below. For security, we have implemented a timeout 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 in, click on the "edit/paste" on the menu above. If you do type your review in here, please copy it first and save it elsewhere before sending an acknowledgement if we have successfully received your review. **Maximize the screen if you don't see a scroll bar.**

Overall Evaluation (Required)

- ☐ Excellent and Exciting
- ☐ Above Average
- ☐ Mediocre or Poor
- ☐ Too Specialized

Recommended Action (Required)

- ☐ Publish w/o Delay
- ☐ Publish with minor revisions
- ☐ Not highest priority
- ☐ 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.vesmír.cz/clanek/vlada-prumernosti>

Novotný V. 2000: Kargo kult, český vědecký. Vesmír 79: 284.

<http://www.vesmír.cz/clanek/kargo-kult-cesky-vedecky>

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



Několik prostých doporučení ...

Yale University

Department of Ecology & Evolutionary Biology

Stephen C. Stearns, Ph.D.

Bio | Career | Honors | Publications | **Some Modest Advice for Graduate Students** | Designs for Learning

Some Modest Advice for Graduate Students
by Stephen C. Stearns

Always Prepare for the Worst.

Some of the greatest catastrophes in graduate education could have been avoided by a little intelligent foresight. Be cynical. Assume that your proposed research might not work, and that one of your faculty advisers might become unsupportive - or even hostile. Plan for alternatives.

Nobody cares about you.

The Evolution of Life Histories
Stephen C. Stearns

<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>

Nobody cares about you!

Specifika a nevýhody práce v terénu, zejména v městské zeleni

Jak jsem již uvedla, městská zeleň je specifická zejména zvýšenou koncentrací osob a psů. Zejména během první zimy jsme se musely obrnit ohromnou trpělivostí proti zlovolnému jednání jednoho starousedlíka, který našel potěšení v tom, že nám mohl připravovat nepříjemná překvapení. Jako když nám odcizil krmítka a bidýlka a poschovával po okolních lesích (u čehož jsem ho přistihla). Dalším nemilým překvapením bylo, když někdo rozházel slunečnici z krmítek v jejich okolí, a my pak nemohly pracovat až do doby, než zvířata

slunečnici odstranila, neboť by vznikla situace negativně ovlivnila návštěvnost krmítka. Ve většině případů jsme se setkaly s pochopením a podporou náhodných i pravidelných kolemjdoucích.

Občas jsme se setkávaly s nepřízní počasí, v podobě deště či silného sněžení. Abychom nepřišly o techniku a pomůcky, musely jsme nejdnou opustit rozdělanou práci.

Úspěšně (!!!) obhájená DP (Univerzita Karlova)

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>

Realita impaktových štvanic ...

- „Scientists, like sportsmen and writers, are ... running for ... prizes ...“ (s. 78)
- ... ale trocha sebereflexe neuškodí:

Tomáš Grim	FORUM
IF: triky a pověry	(Citovaná literatura) bývá v biochemii dvakrát delší než v matematice. Přičítáme k tomu fakt, že matematici mají ve zvyku publikovat méně často, zato větší články, zatímco biochemici jsou typičtí snahou produkovat menší publikovatelné jednotky – výsledky po částech do více článků. Ve velkých oborech IF dosahuje vyšších hodnot – čím více časopisů v oboru, tím
At se to komu líbí či ne, vymnout se hodnotení ve vědě podle jednoznačných kvantifikačních kritérií nelze. V zásadě je hodná. Pak ovšem není divu, že se jen málokdo vzdá, když mu někdo řekne, že jeho	článek determinuje IF (z definice), naopak IF determinuje článek. Článek, který má vysoký IF, je tedy článek, který je citován často.
Citace: triky a pověry	... v českých vědeckých kruzích [probíhá absurdní debata] o tom, zda se vůbec dají měřit a hodnotit výsledky vědecké práce a jak. Zpochybňování zjevné skutečnosti, že jedna skvělá práce je lepší než sto průměrných a že důležitá práce se zpravidla objevují ve špičkových časopisech a jsou zpravidla hojně citovány, zatímco práce bezvýznamné nikoli, je tak nutno vidět spíše jako zábavný materiál k esejí ... než seriózní příspěvek do vážné míněné diskuse. V. Novotný: Kargo kult, český vědecký. Vesmír 2000, 79 (5): 294

vity spoluautorů, což nemá nic společného s kvalitou publikační aktivity sledovaného autora. Proporce autocitací a citací spoluautorů může být překvapivě vysoká. Některé – na poměry v oboru – silně citované články se při detailním pohledu překvapivě ukážou jako v podstatě zapomenuté všemi (tedy kromě jejich autorů). Někdy jsem například narazil na článek ze 15 let citovaný celkem 30x – na ornitologii nadprůměrně. Po vyřazení autocitací však zůstalo pouhých 10 plnohodnotných citací – v tomto oboru podprůměrně. (3) WoS umožňuje volbu bez autocitací (View without self-citations), která jednak nevylučuje citace spoluautorů a naopak může opylen výnosci platné citace stejnojmenným autorem. Ta ovšem uvidí celkový počet článků, které daného autora citu-

Medawar 1979: Advice to a Young Scientist

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!

... *jakýkoli* text! Lay summary vs. paper



Benefits of Open Access Research

- **Accelerated discovery.** With open access, researchers can read and build on the findings of others without restriction.
- **Public enrichment.** Much scientific and medical research is paid for with public funds. Open Access allows taxpayers to see the results of their investment.
- **Improved education.** Open Access means that teachers and their students have access to the latest research findings throughout the world.

Tips for Writing a Lay Summary

- You need a good title; keep it short and simple.
- The first sentence is crucial. Could you explain your research in 25 words?
- What's the wow factor? Does it inspire?
- Focus on the relevance, the application or the benefits. The 'so what' factor. Why is the work important?
- Find someone who isn't in your field to read over the summary. Get feedback on your draft from colleagues, supervisors, and at least one non-specialist friend. See what questions they have and ask them to explain back to you what they thought you were communicating.
- Avoid technical and scientific terms.
- Avoid acronyms. If you do use one explain it.
- Be specific. Can you include a fascinating fact?
- Make it easy for the reader. Reduce the need for others to translate what they think you mean.
- Short, simple words. Use plain language; avoid uncommon English words, use everyday words. Use (Anglo-Saxon) words; avoid Latin-based words; avoid Latin

<http://www.researchsupport.eps.manchester.ac.uk/documents/pe/>

Sumář obecností (alespoň 7i)

- *můj* přístup = základ
- za moji práci jsem zodpovědný já
- učím se z chyb – cizích i vlastních
- optimalizuji, tedy jsem
- plánuju – Paretovo pravidlo
- obec. principy jsou 1. (ne specifické prkotiny)
- forma ~ obsah ~ přesvědčování

zdravý rozum©

Autorství

Tomáš Grim

FORUM

(Spolu)autorství: triky a pověry

Být úspěšný ve vědě vyžaduje nejen znalost metodiky, designu pokusů, statistiky, prezentace výsledků a odborného psaní. Je třeba mít povědomí i o tématech, která jsou zdánlivě okrajová, např. k čemu nám může sloužit pochopení, nebo naopak jak nám může škodit nepochopení impakt-faktorů (IF; Živa 2009, 1: XII–XIII) či citovanosti (Živa 2009, 3: XLIV–XLV). Třeba při hodnocení publikačního výkonu nebo rozhodování, do jakého časopisu pošleme rukopis. Jedno z témat, jež hlavně začínající autoři při sepsávání publikací

v době, kdy sepisujeme výsledky proběhlého výzkumu, je jednou z největších hloupostí, jakých se vědec může dopustit (imunní proti tomu nejsou ani zkušení badatelé). Míra příspěvku je vždy subjektivní – pro někoho vyžaduje větší úsilí myslet, pro jiného bdít v laboratoři nebo sbírat data v terénu. Už z tohoto důvodu nelze jen na základě objektivního popisu odvedené práce rozhodnout, kolik úsilí si vyžádal jaký příspěvek kterého zúčastněného. Jediná (kategorický výraz, ale zde platí možnost je explicitně fideálně psat

ní důsledky. [...] Uznání autorství by mělo být založeno na: 1. podstatném příspěvku ke koncepci a designu studie anebo na získání dat anebo analýze a interpretaci dat; 2. sepsání rukopisu nebo jeho kritické revizi z hlediska významného intelektuálního obsahu; a 3. na konečném schválení verze určené k publikování. Autoři by měli splnit všechny tyto podmínky. [...] Samotné získání finanční podpory, sběr dat, nebo obecný dohled nad výzkumnou skupinou neopravňují ke spoluautorství. [...] Každý autor by se měl na práci podílet dostatečně tak, aby mohl za odpovídající část této práce převzít veřejně odpovědnost. [...] Pořadí autorů by mělo být společným rozhodnutím všech autorů. Ti by měli být schopni pořadí vysvětlit.“

Kdo patří do poděkování?

„Všichni přispěvatelé, kteří nesplňují kritéria autorství, by měli být uvedeni

Uniform requirements for manuscripts submitted to
biomedical journals

International Committee of Medical Journal Editors

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

Obsah

Význam výsledků

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

Kukačka
obecná

Oldřich Mikulica

THE ROYAL SOCIETY **biology letters**

Nestling discrimination
without recognition:
a possible defence
mechanism for hosts
towards cuckoo
parasitism?

Tomáš Grim^{1*}, Oddmund Kleven²
and Oldřich Mikulica¹

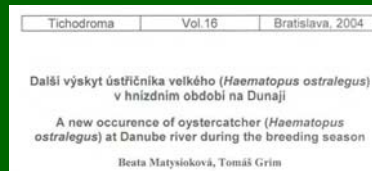
- autoři často **neví**, co jejich data říkají:
 - Živa 1993 vs. Proc. R. Soc. 2003

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.

Jak a kolik toho chci sdělit?

- jak = forma
- kolik = obsah
- 2 strany 1 mince:

Stejný příklad, jiná pointa:

Introduction

Colourful biological pigments are among the most conspicuous products of metabolism and serve a wide variety of **physical**, **physiological**, and **behavioural** functions [1]. Accurate descriptions

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.

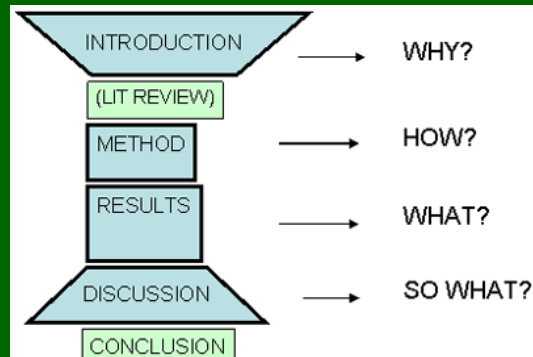
Haff & Magrath 2011: Biol. Lett.

2 málo, 4 moc



IMRAD – pořadí částí

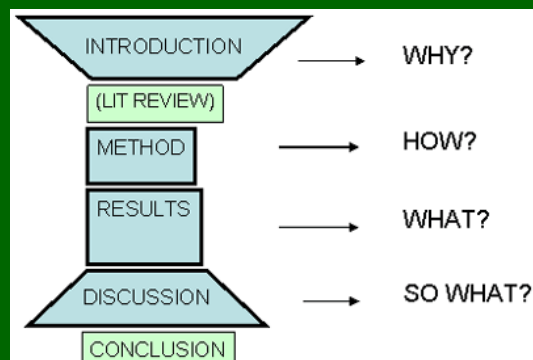
- Title
- Authors
- Abstract
- Introduction
- **M**ethods
- **R**esults
- **D**iscussion
- Acknowledg(e)ments
- References



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

IMRAD vs. pořadí psaní!

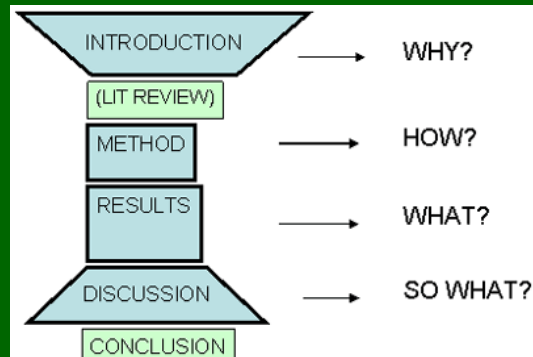
6. Title
- Authors
5. Abstract
4. Introduction
1. **M**ethods
2. **R**esults
3. **D**iscussion
- Acknowledg(e)ments
7. References



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 - obsah

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

KAREL WEIDINGER¹

Begging intensity of nestling **birds** **varies** with sibling
relatedness

JAMES V. BRISKIE^{1†}, CHRISTOPHER T. NAUGLER²
AND SUSAN M. LEECH²

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 - obsah

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 Brno~~

Kopij G. : Hnízdní hustota a výběr hnízdního prostředí
roryse obecného (~~Ampelis gularis~~) ~~na Moravě~~

Matysiuková B. & Tobočka M. : Co ovlivňuje délku pobytu v
teritoriu po vyhánění u čápa bílého (*Ciconia ciconia*)?

Zárybnická M. : Cirkadiánní aktivita sýce rousného (*Aegolius
funereus*) ~~v krasném hradě~~: 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 - obsah

- modelový druh = prostředek
- odpověď na otázku (hypotézu) = cíl
- kdo bude hledat „white stork“?
- kdo bude hledat „post-fledging“?

Google Scholar, Web of Science

Efekt(iv)ní název - údernost



Contents lists available at ScienceDirect

Molecular Phylogenetics and Evolution

journal homepage: www.elsevier.com/locate/ympev



Multi-locus phylogeny of the family Acrocephalidae (Aves: Passeriformes) –
The traditional taxonomy overthrown

Silke Fregin^{a,*}, Martin Haase^a, Urban Olsson^b, Per Alström^{c,d}

PROCEEDINGS
OF
THE ROYAL
SOCIETY **B**

Proc. R. Soc. B (2007) 274, 735–739
doi:10.1098/rspb.2006.0011
Published online 12 December 2006

**Songbird migration across the Sahara:
the non-stop hypothesis rejected!**

Heiko Schmaljohann^{*}, Felix Liechti and Bruno Bruderer

Efekt(iv)ní název - idiom, rým

 **Update** *TRENDS in Ecology and Evolution*

Research Focus

It takes two to tango

Hanna Kokko^{1,2} and Michael Jennions¹

 **THE ROYAL SOCIETY**

Better red than dead: carotenoid-based mouth coloration reveals infection in barn swallow nestlings

Nicola Saino^{1*}, Paola Ninni², Stefano Calza¹, Roberta Martinelli¹, Fiorenza De Bernardi¹ and Anders Pape Møller²

Efekt(iv)ní název - sexy názvy

 **Update** *TRENDS in Genetics* Vol.22 No.10 Full text provided by www.sciencedirect.com

ScienceDirect

Research Focus

Aspergillus genomes: secret sex and the secrets of sex

Claudio Scazzocchio

 **Review** *TRENDS in Endocrinology and Metabolism* Vol.18 No.8 Full text provided by www.sciencedirect.com

ScienceDirect

It's all about sex: gender, lung development and lung disease

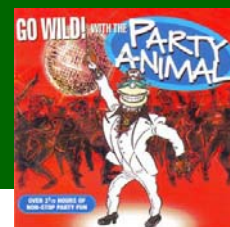
Michelle A. Carey, Jeffrey W. Card, James W. Voltz, Samuel J. Arbes Jr, Dori R. Germolec, Kenneth S. Korach and Darryl C. Zeldin

Research Focus

Birds gone wild: same-sex parenting in albatross

Marlene Zuk and Nathan W. Bailey

Department of Biology, University of California, Riverside, CA 92521, USA



Efekt(iv)ní název

- maximální stručnost

Eusociality: Origin and consequences

Edward O. Wilson*† and Bert Hölldobler‡§
*Museum of Comparative Zoology, Harvard University, 26 Oxford Street, Cambridge, MA
 †Arizona State University, Tempe, AZ 85287-4501, and ‡Theodor-Boveri-Institut für Biologie
 ‡Lehrstuhl für Zoologie II, Am Hubland, 99074 Würzburg, Germany

Contributed by Edward O. Wilson, July 12, 2005

In this new assessment of the empirical evidence, an alternative to the standard model of binding force in eusocial evolution: individual selection, the strong dissolutive force, and weak binding or weak dissolutive force, according to circumstance. Close kinship may be

- 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.

Efekt(iv)ní název

- ale výjimky:

Ecology, 79(8), 1998, pp. 2676–2693
 © 1998 by the Ecological Society of America

THE ROYAL SOCIETY **biology letters**

Observation of a ZZW female in a natural population: implications for avian sex determination

D. Arlt¹, S. Bensch¹, B. Hansson, D. Hasselquist and H. Westerdahl

AN 85-YEAR STUDY OF SAGUARO (*CARNEGIEA GIGANTEA*) DEMOGRAPHY

ELIZABETH A. PIERSON¹ AND RAYMOND M. TURNER



J. Avian Biol. 38: 133–138, 2007
 doi: 10.1111/j.2007.0908-8857.04064.x
 Copyright © J. Avian Biol. 2007, ISSN 0908-8857
 Received 18 September 2006, accepted 9 December 2006

Lost and found: the enigmatic large-billed reed warbler *Acrocephalus orinus* rediscovered after 139 years

Philip D. Round, Bengt Hansson, David J. Pearson, Peter R. Kennerley and Staffan Bensch

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).

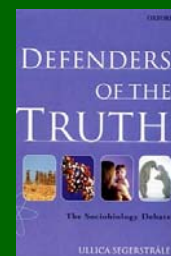
Begging by nestling birds has been used to test evolutionary models of signalling but **theory has outstripped evidence**. Eavesdropping predators potentially impose a cost on begging that ensures signal honesty, **yet little experimental evidence exists** for such a cost at active nests because the 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

délka vět (slova)

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

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

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.

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

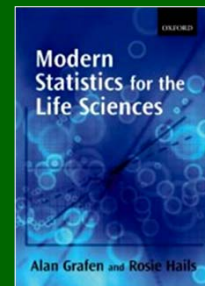
Metodika – statistika

- 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

Metodika – statistika

- multikolinearita
- jak vybrán MAM: backward elimination, AIC_C
- kontrola MAM:
 - linearity of effect
 - normality of error
 - homogeneity of variance



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

Metodika – statistika

- $P < 0.05 \neq$ ponechat proměnnou v modelu
- $P > 0.05 \neq$ vyjmout proměnnou z modelu
- *a priori* konzervativní rozhodnutí

[Additional to statistics in ecology, there should be] “much more emphasis on thinking” (Burnham & Anderson 2002).

Burnham & Anderson 2002: Model selection and multimodel inference.

Metodika – statistika

- náhodné efekty = *hypotézy* o závislosti dat!
- časoprostorová kovariance – *může* být

then results in simple pseudoreplication. Later, we will argue that the decision whether or not to pool data, is an empirical and not an a priori decision.

Schank & Koenhle 2009: J. Comp. Psychol.

In all our models, the random effects of year and locality were very small (likelihood ratio tests; Bolker *et al.* 2009), i.e. there was no significant spatio-temporal variation in the data. When removed, the resulting simpler models with the same structure of fixed effects had a dramatically better fit (much lower AIC_c) and very similar parameter estimates. Hence, we decided to present results of the models without random effects (Bolker *et al.* 2009).

Bolker et al. 2009: Trends Ecol. Evol.

Grim et al. 2009: J. Anim. Ecol.

Metodika – statistika

- větší vzorek *není* automaticky lepší
- kvalita sběru dat
- matoucí proměnné
- časoprostorová reprezentativnost
- očekávaný „effect size“

- rostoucí vzorek =
- benefit – větší reprezentativnost
- cost – větší výdaje (čas, úsilí, peníze, etika)

Taborsky 2010: Ethology

Metodika – statistika

- co je lepší: vzorek 34 nebo 340?
- variabilita prediktorů



“... good design can make such a difference to how big the sample must be”
(Martin & Bateson 2008)

Grim 2005: Biol. J. Linn. Soc., Grim 2005: Auk

Metodika



- srovnávání *dvou* druhů, populací, lokalit ...

797

Invited Perspectives in Physiological Zoology

Why Not to Do Two-Species Comparative Studies: Limitations on Inferring Adaptation

Theodore Garland, Jr.¹

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Accepted 3/9/94

One thing cannot be evaluated unless it can be compared with another. This is, of course, why degrees of freedom in statistics are the number of observations minus one. [BRADSHAW 1987a, p. 71]

Adaptation can only be measured and indeed discussed on a comparative basis. . . . Adaptation is entirely a comparative concept. [BRADSHAW 1987a, p. 71]

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

Metodika



- srovnávání dvou X = pseudoreplikace!
- *statistická* chyba (ne chyba designu!)
- „location difference“; obecnost inference

Ecological Monographs, 54(2), 1984, pp. 187–211
© 1984 by the Ecological Society of America

PSEUDOREPLICATION AND THE DESIGN OF ECOLOGICAL FIELD EXPERIMENTS¹

STUART H. HURLBERT
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San Diego, California 92182 USA

Abstract. Pseudoreplication is defined as the use of inferential statistics to test for treatment effects with data from experiments where either treatments are not replicated (though samples may be) or replicates are not statistically independent. In ANOVA terminology, it is the testing for treatment effects with an error term inappropriate to the hypothesis being considered. Scrutiny of 176 experi-

Hurlbert 1984: Ecol. Monogr.

Metodika



- interakce
- ~30% článků s nesignif. interakcí chybně!
- ~50% článků se signif. interakcí chybně interpretováno!
- Badyaev et al. (Evolution 2003), Langmore et al. (Evolution 2008)

Methods in Ecology and Evolution

Methods in Ecology & Evolution 2010, 1, 103–113

doi: 10.1111/j.2041-210X.2010.00012.x

Simple means to improve the interpretability of regression coefficients

Holger Schielzeth*



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COMMENTARY

The mistreatment of covariate interaction terms in linear model analyses of behavioural and evolutionary ecology studies

LEIF ENGQVIST

Institute of Evolutionary Biology and Ecology, University of Bern

(Received 24 November 2004; initial acceptance: 31 December 2004;

final acceptance 14 February 2005; published online 29 August 2005; MS. number: SC-1272)

In behavioural and evolutionary ecology, there are often large phenotypic differences between individuals in, for example, body size or large variation in abiotic conditions.

is the mean intercept (the average value of the response parameter when the value of the covariate equals zero), α_i is the response to the i th category of the factor, β_i the value

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

Metodika – statistika

- složitá statistika není ctnost!
- N. B. Davies & Mann-Whitney



N. B. Davies (např. Anim. Behav. 1988, J. Anim. Ecol. 1989, ...)

Výsledky

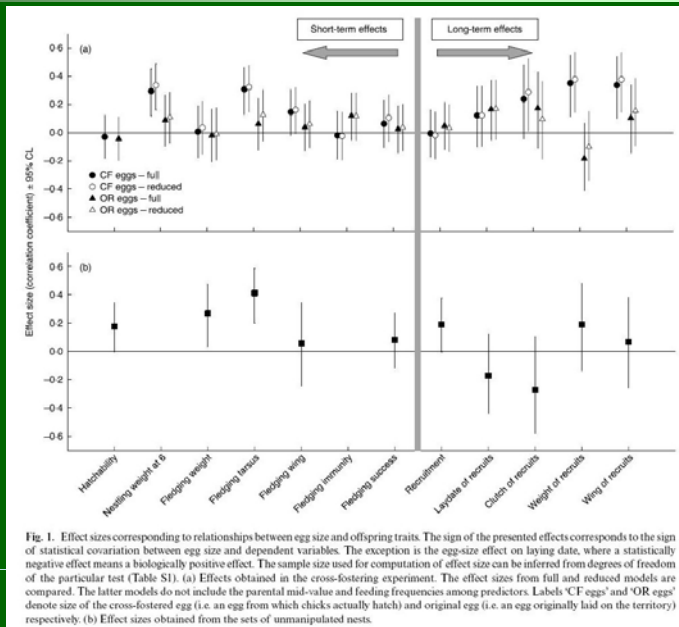
- co potřebuje čtenář vědět?

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



Krist 2009: JAE

Výsledky

- pořadí významnosti výsledků
- velikost efektu vs. P-hodnoty
- „estimate $\pm$ 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.



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!

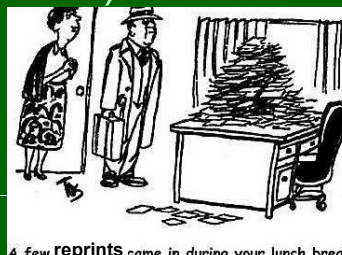
<http://www.icmje.org/>

Literatura

- zdroje zastaralé / ne přesně k tématu
- necitovat: diplomky, abstrakty, ...
- citovat:
 1. něco zásadního ("a classic")
 2. něco nového (on-line first, in press)
 3. něco málo známého (ale k věci)

- chybné citace – formát
 - necitovat z druhé ruky!

zdravý rozum



Literatura

- chybné citace obsah - v ekologii 25% (!):
➤ necitovat naslepo nebo dle abstraktů!



Oikos 116: 1599–1601, 2007
doi: 10.1111/j.2007.0030-1299.15992.x,
Copyright © Oikos 2007, ISSN 0030-1299
Subject Editor: Per Lundberg, Accepted 27 June 2007

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

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

„čím blíží se člověk dostane původnímu zdroji, tím lépe“
(Ch. Langan in M. Gladwell 2009: Mimo řadu. (s. 96))

Todd et al. 2007: Oikos

Obrazové přílohy



- graf > tabulka >> text

~~Tab. 2. Výsledky vícenásobné logistické regrese s odhady parametrů vysvětlujících proměnných přímky (A) a druhý (B) zjednodušený model (R – regresní koeficient, SE – standardní chyba průměru). Koeficient determinace R² = 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 R² = 4.6% (A) and 10.8% (B).~~

(A) proměnná / variable	R	SE
zástavba / built-up area	-0,22	0,102
(B) proměnná / variable		
ssociální predátoři / mammal predators	0,57	0,092
straka obecná (<i>Pica pica</i>)	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.

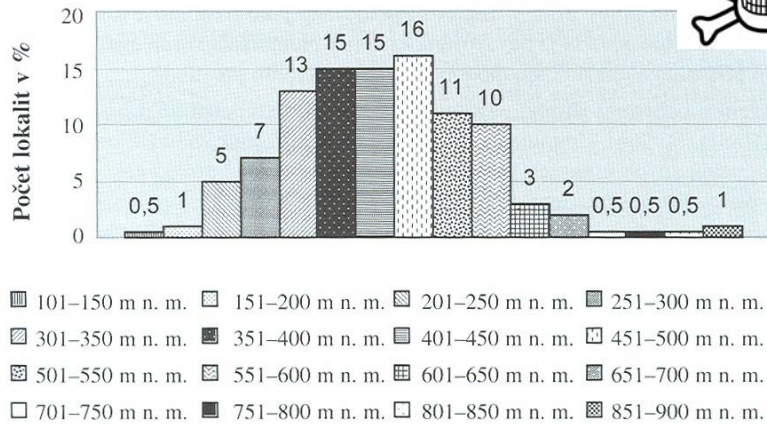
Druh	Hmotnost (g)		t	P
	Město	Vesnice		
Kos černý	23,0 ± 12,5	13,9 ± 3,3	4,39	<0,001
Drozd zpěvný	28,7 ± 30,1	29,1 ± 18,7	0,11	0,36
Pěnice ...	...	...	...	...

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	
		mm ²	%
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 má vypadat graf?

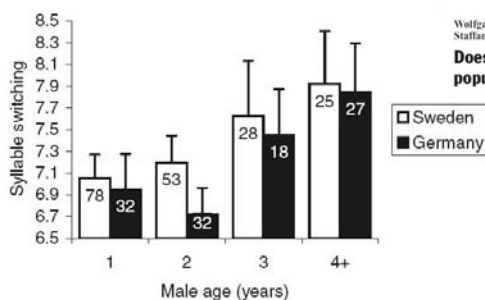


Fig. 3 Repertoire size (a) and syllable switching (b) in relation to male age in two populations. Means±SE are shown for each age class, and sample sizes are indicated. The age class 4+ comprises all measurements of birds older than 3 years. The analysis is cross-sectional and includes pseudo-replicates (the same males recorded at different ages). Repertoire size estimates from the Swedish population were adjusted to account for observer differences (see Methods)

Behav Ecol Sociobiol (2006) 59: 634–643
DOI 10.1007/s00265-005-0090-z

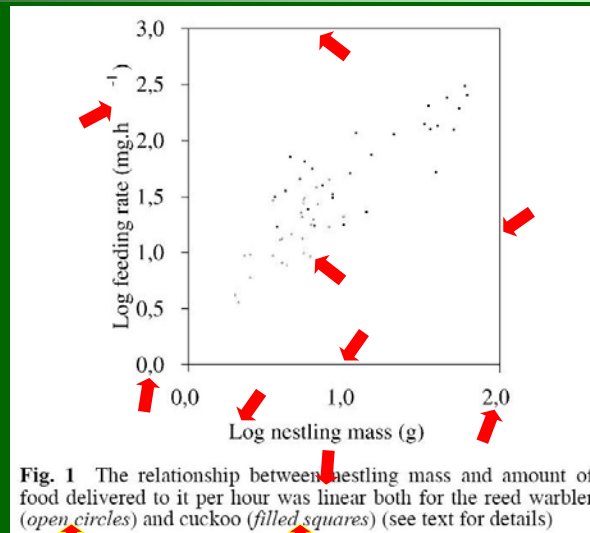
ORIGINAL ARTICLE

Wolfgang Forstmeier · Dennis Hasselquist ·
Staffan Bensch · Bernd Leisler

Does song reflect age and viability? A comparison between two populations of the great reed warbler *Acrocephalus arundinaceus*

Forstmeier et al. 2006: Behav. Ecol. Sociobiol.

Jak nemá vypadat graf?



Grim & Honza 2001: Behav. Ecol. Sociobiol.



Jak má vypadat graf?

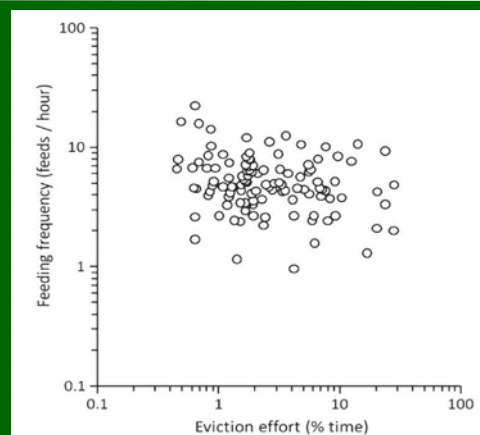
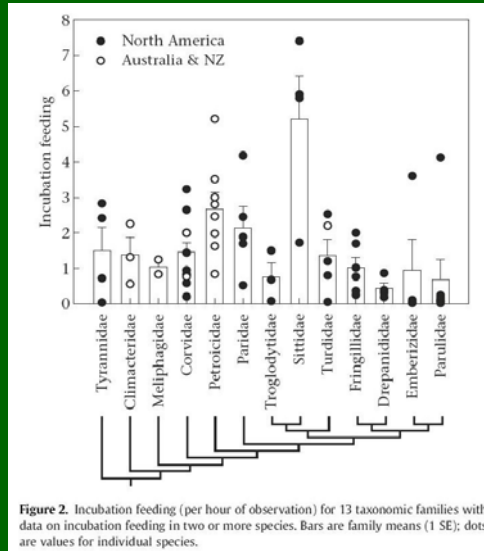


Figure 4
Trade-off between eviction effort by common cuckoo chicks and feeding frequencies by the fosterer common redstarts. Results from GLMM with the eviction effort as a predictor, the feeding frequency as a response, the chick age as a covariate (all log transformed), and the chick identity as a random effect (see Results).

Grim et al. 2009: Behav. Ecol.



Jak má vypadat graf?

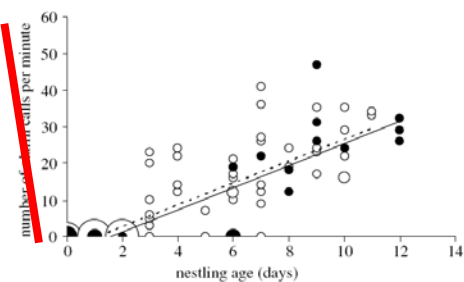


Matysioková et al. 2011: Anim. Behav.



Jak má vypadat graf?

- osy
- popisky
- jednotky
- vysvětlivky



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.

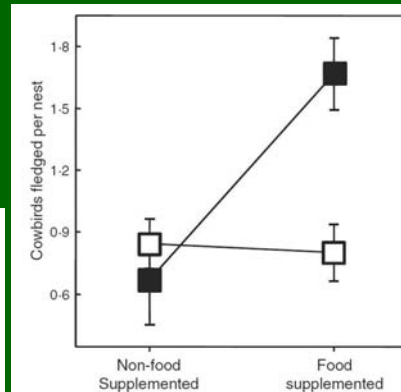
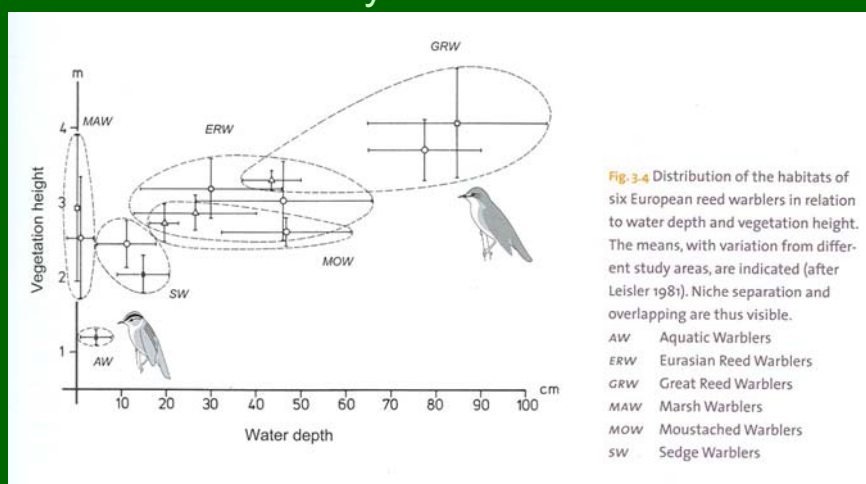


Fig. 2. Effects of food addition and multiple cowbird parasitism on the number of cowbirds fledged per nest fledging young. Food supplemented refers to sparrow territories provided with added food, as compared to non-food supplemented territories. Open symbols = singly parasitized nests (i.e. containing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



Jak má vypadat graf?

- variabilita v x + y



Leisler & Schulze-Hagen 2011: The Reed Warblers



Jak má vypadat graf?

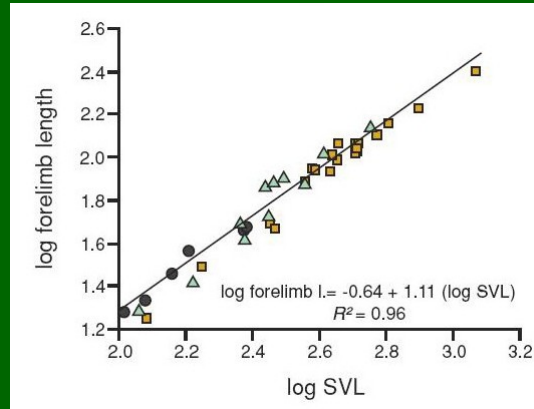


Figure 3. Scaling of morphological traits in *Varanus*. Data are species values for log-transformed morphological traits and SVL, but the scaling relationships depicted are based on phylogenetic reduced major axis regressions of traits on size (see Materials and Methods for details). R^2 is the proportion 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?

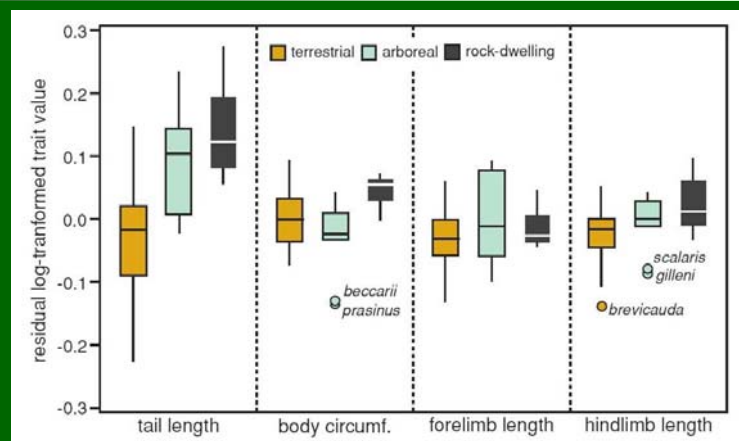


Figure 4. Boxplots for species' size-corrected morphological traits in each of the three habitat categories. Whiskers are standard, extending to the 9th and 91st percentile of the distributions. Labeled points are species values falling outside of this range. Colors correspond to habitat states: orange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

Collar et al. 2011: Evolution



Jak má vypadat graf?

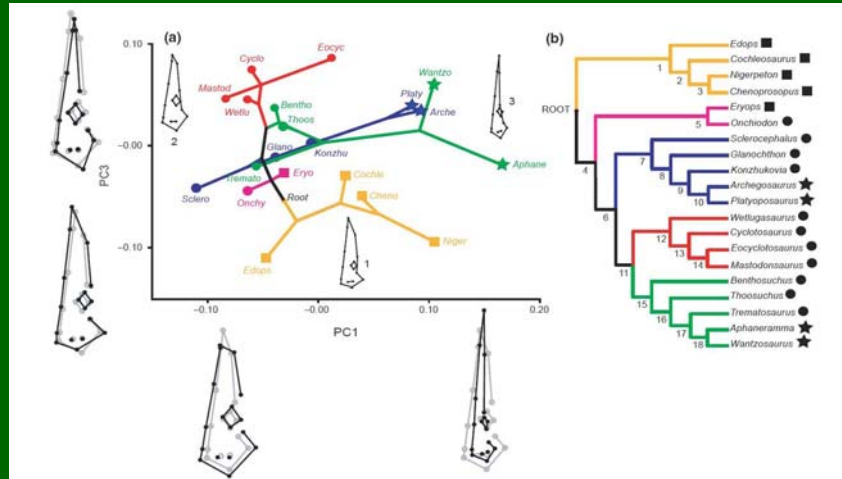
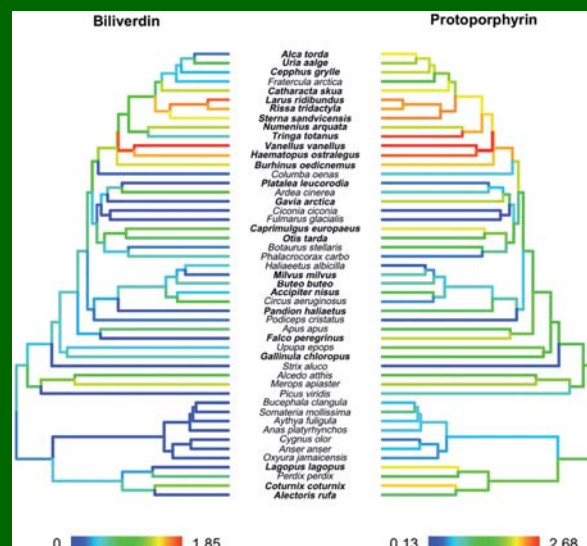


Fig. 3 (a) First and Third PCs of the Principal Component Analysis with the phylogeny plotted. (b) Simplified cladogram for temnospondyls based on Ruta *et al.* (2007). Stars: fully aquatic feeders, circles: amphibious feeders, squares: terrestrial feeders. The mean shape for each lifestyle was obtained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

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



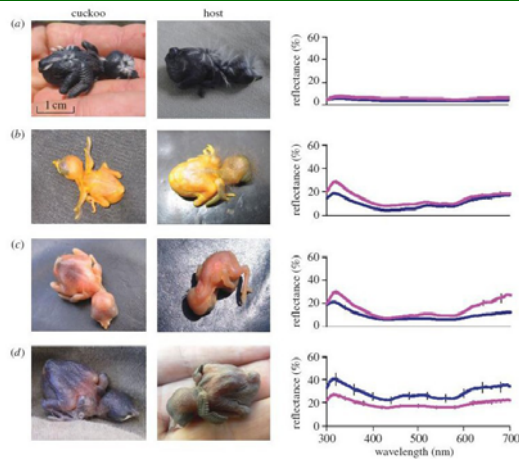
Jak má vypadat graf?



Cassey *et al.* 2012: Biol. J. Linn. Soc.



Jak má vypadat graf?



biologicky relevantní
info (ptáci – UV-světlo)

Figure 1. Representative photographs and mean $\pm$ 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.

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

Jak nemá vypadat popiska grafu?

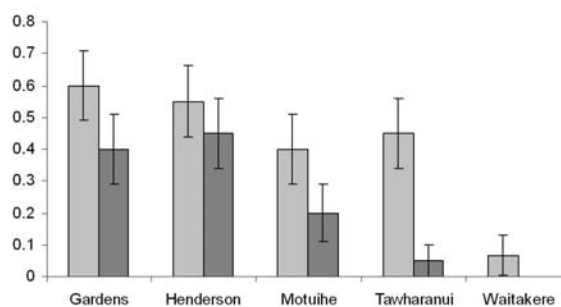
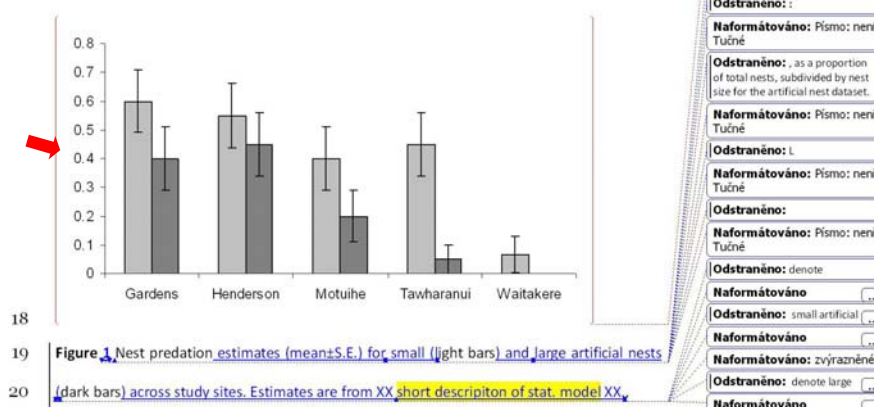


Figure One: Nest predation, as a proportion of total nests, subdivided by nest size for the artificial nest dataset. Light bars denote small artificial nests; dark bars denote large artificial nests. Error bars are $\pm 1SE$ under a canonical binomial distribution.

rukopis



Jak má vypadat popiska grafu?



rukopis

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

rukopis



Jak má vypadat popiska tabulky?

the findings is presented in Table Two.

6

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

8 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

9

10 No difference was seen in overall rates of predation between real and artificial

12 nests ($z=1.08$, $p=0.28$), and overall rates of predation were lower in sites with mice

13 only than in sites with all mammals ($z=2.08$, $p=0.0380$). However, analysis

14 comparing rates of predation on real nests and large artificial nests in sites with all

Odstraněno: Two

Odstraněno: :

Naformátováno: Písmo: není
Tučné

Odstraněno: T

Naformátováno: Písmo: není
Tučné

Naformátováno: Písmo: není
Tučné

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

Naformátováno: Písmo: není
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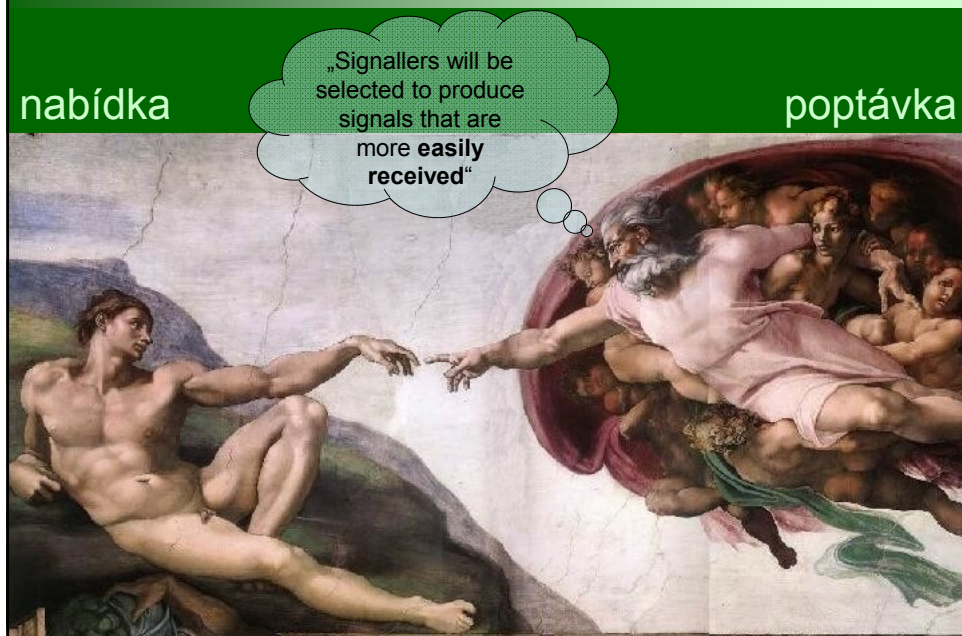
Vloženo: "

Vloženo: "

rukopis

Formát & styl

Leitmotiv – receiver psychology



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.

Formát & styl

- „lajdácké psaní naznačuje lajdácké myšlení“
- pozor na formulace: suggests vs. indicates
- fomát *všeho* – jasná pravidla

Place explanatory matter in footnotes, not in the heading. Explain in footnotes all non-standard abbreviations that are used in each table. For footnotes use the following symbols, in this sequence: *, †, ‡, §, ||, ¶, **, ††, ‡‡ etc.

Identify statistical measures of variation such as standard deviation and standard error of the mean.

Do not use internal horizontal and vertical rules.

Be sure that each table is cited in the text.

author guidelines

Formát & styl

- trpný rod = 
- činný rod
 - stručnější
 - není víceznačný
 - zodpovědnost!
- čas přítomný – obecné pravdy
- čas minulý – konkrétnosti + nová zjištění
- abstraktní podst. jména ► aktivní slovesa

author guidelines

Formát & styl



Lidé – čtete!

Automatický formát



Účastníci řízení (podle § 27 odst. 1 správního řádu)

- doc. RNDr. Tomáš Grim, Ph.D., nar. 13.9.1973, trvale bytem Bohuslava Martinů 13, 602 00

Žádost podali:

TG

Mark Hauber

Jarkko Rutila

Odůvodnění

Csába Moskát svého řízení bylo stanovení odchýlného postupu za účelem řešení významného mezinárodního vědeckého výzkumného projektu v oblasti odchytu jedinců kosa černého a drozda zpěvného, dále odběry krevních vzorků a mimo jiné i pozorování chování obou uvedených druhů. Na uvedeném projektu žadatel spolupracuje s Dr. Markem Gaunerem (Auckland University, Nový Zéland), Dr. Philipem Casseym (University of Birmingham, Velká Británie), Dr. Jarkkoem Rutinou (Finsko) a Dr. Chabom Moskytem (Maďarsko). Výzkumný projekt je součástí základního výzkumu nezbytného pro poznání evolučních vztahů mezi hnízdními parazity a jejich hostiteli. Projekt navazuje na dlouholetou práci žadatele v oblasti, která už vedla k celé řadě významných zjištění.

Na základě výše uvedených skutečností bylo rozhodnuto tak, jak je uvedeno ve výroku rozhodnutí.

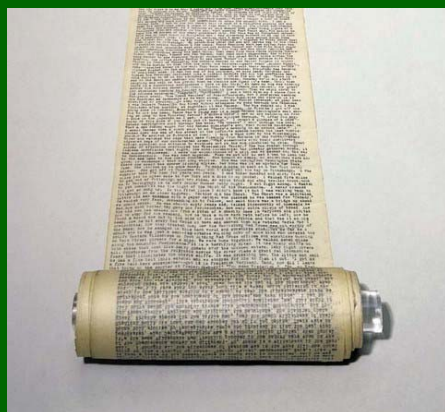
Poučení o odvolání

Proti tomuto rozhodnutí lze podat odvolání do 15ti dnů ode dne jeho oznámení. Odvolání se

Zdravý rozum

Během přípravy MS

- psát *rychle* (slovní průjem)
- nebo psát „po kouskách“



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

Během přípravy MS

- ukládat kopie („..._2012-02-03_TG“)
- pozor na paralelní verze (více autorů)
- „neleštit“ formát před obsahem!
- MS nechat „uležet“ (odstup!)



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

Psaní

Eviction_costs_Finland_2009-04-04_Tomas_PC - Microsoft Word

Soubor Úpravy Zobrazení Vložit Formát Jazyky Tabulky Odkazy Nápověda Adobe PDF Bezpečný Acrobat

Normální Georgia 12 Konečný se značkou Zobrazení

111 We conducted fieldwork in Ruokolahti (61° 24' N, 28° 37' E) in south-eastern Finland

112 from May to July 2007 and 2008. The study sites were cultivated forests. We utilized

113 400 nest boxes specially designed for redstarts, see Rutila et al. (2002) for details.

114 Our nest boxes were large (inner size: width=12cm, depth=12cm, height=cm) and,

115 consequently, the nest cup had wide rims where the evicted egg can be deposited (for

116 a representative photo see Fig. 1 in Grim et al. 2009). The typical size of redstart

117 natural cavity is XXX (Cramp XXXX, p. XXX). Thus, the nest-box design could not

118 confound our estimations of eviction costs by constraining the evicton success of

119 cuckoo chicks. We checked nest boxes several times during the laying and incubation

120 stage to establish clutch completion dates (assuming a single egg laid per day) and

121 once or twice daily during expected hatching time, as well as during the first 7 days

122 post-hatch (see below). Older nests were checked whenever feasible (typically every

Odstraněno: carried out the

Odstraněno: might end up

Komentář: Do you need me to look up this reference?

Odstraněno: do

cramp, 11.4.2009 12:59 odp.:
Please forward

Před odesláním do redakce...

- citace v textu vs. Literatura
- formát pro daný časopis
- gramatika – Nástroje ► Pravopis!
- překlepy – Ctrl+H
- formát obrazových příloh
- „dát někomu přečíst“ *před* submitací

- **žádný spěch!**

"Jak mám vědět, co jsem řekl, dokud jsem na to neslyšel odpověď?"
(Norbert Wiener)

Zdravý rozum©

... ale do které redakce?

- zaměření časopisu
- oborový či obecný?
- IF (~ rejection rate)
- rychlost redakční práce
- omezená délka textu?
- platí se za překročení stránkového limitu?
- platí se za otištění a/nebo barevné foto?

author guidelines



... ale do které redakce?



Criteria for publication

The principal criteria for publication of scientific papers (Articles and Letters) in *Nature* are that they:

- report original scientific research (the main results and conclusions must not have been published or submitted elsewhere)
- are of **outstanding scientific importance**
- reach a conclusion **of interest to an interdisciplinary readership**.

Who decides what to publish?

Nature has space to publish only 8% or so of the 200 papers submitted each week, hence its selection criteria are rigorous. *Nature* does not employ an editorial board of senior scientists, nor is it affiliated to a scientific society or institution, thus its decisions are independent, unbiased by scientific or national prejudices of particular individuals. The judgement about which papers will interest a broad readership is made by *Nature's* editors, not its referees.

The Journal of Ethology features reviews and original papers relating to all aspects of animal behavior, including traditional ethology. The journal presents papers on field, laboratory, and theoretical studies. **In contrast to ethological journals that prefer studies testing explicit hypotheses, the Journal of Ethology publishes both in observational studies and in experimental studies.**

author guidelines

... ale do které redakce?



"It's worth the effort of sending your paper to the highest journals where it belongs."

Mark Hauber

Powell 2010: Nature

CAREERS

CHOICE Choosing the right path after finishing a graduate is tricky **2010** **RESEARCH** Biomimicry and space science drive research in Belgium **2010** **RESEARCH** For the latest career listings and advice **www.nature.com/careers**

It is that the publishing process requires not only hard work but also resilience — and struggling young authors can learn valuable lessons from those who have already navigated that process.

In taking the all-important route to publication, inexperienced authors have several factors to consider and obstacles to overcome. From finding ways to combat writer's block to gracefully pursuing the journal's submission and review process, established authors and journal editors suggest thinking early about the right journal and finding an appropriate editor, the best reviewers and, of course, an appropriate audience of readers. And new authors should be careful to publish their work and respond meticulously and politely to reviewers' comments without getting overwhelmed or frustrated by lengthy, time-consuming queries. Those who follow such advice are more likely to find success. Those who don't could end up on the wrong side of the publish-or-perish divide.

IN THE BEGINNING

For many publishing veterans, the writing process starts at the earliest stages of designing a research project. "Thinking breeds a comprehensive, thought-out experiment. Do that up front and your writing will come so much more easily," says Mark Hauber, a neuroscientist at the University of Iowa in Iowa City and editor-in-chief of *Behavioral Neuroscience*. It can be helpful to think of the project as a tentative title for the article it will become, a constant reminder of the scope it should span, recommends Bill Nassaroff, an environmental engineer at the University of California, Berkeley.

Elaine White, associate director of the Cancer Institute of New Jersey in New Brunswick and a senior editor at *Cancer Prevention Research*, says that researchers should have a "road map" of an interesting question, experiments to test it and a final answer. And when it comes to writing, she says, "I've really learned that you've got to take a moment at face value," says Karter, now a postdoc at the National Institute of Water and Atmospheric Research in Auckland, New Zealand. "If you've got the gut feeling that you've got good stuff, you've just got to be persistent. Getting into PNAS was fantastic," he says. "The reviewing process can be a nightmare," says Hauber, an animal behaviorist now at Brown College, City University of New York. The moral of the story

of the National Academy of Sciences (NAS) was not-so-quickly accepted.

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Odeslání do redakce

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Manuscript Type
 Manuscript Type: Original Article

Title (Limit 50 words)
 Brood parasite chick desertion: a by-product of intraspecific coevolution within the host species?

Running Head (Limit 50 characters)

Abstract (Limit 200 words)
 Models of parasite-host coevolution typically predict evolutionary feedback between specific host defenses and parasite counter-defenses. In contrast, that hosts may reduce costs of parasitism by adaptations evolved in contexts unrelated to parasitism per se was so far rarely considered. We studied host nest variables which do not recognize alien nestlings but still avoid costs of prolonged care for some parasitic common cuckoo chicks by deserting them long before their standard fledging age. We compared host own chicks' growth patterns under natural and experimental conditions when parents were forced to care for nests for prolonged or shortened periods than normally. Parents enforced their chicks to fledge, providing the first evidence of such

Odeslání do redakce

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Step 3: Authors & Institutions
 1. Grim, Tomas; Palacký University, Department of Zoology

Step 4: Reviewers & Editors
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Number of Tables:	
Number of Words:	

Odeslání do redakce

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[Explaining publication output among scientists: a possible role of social activities?](#)
Journal Name: The Auk Submitted Date: 05/23/2006
MS # 06-102 - Version 1 MS Status: MS Rejected [View Decision Letter](#)

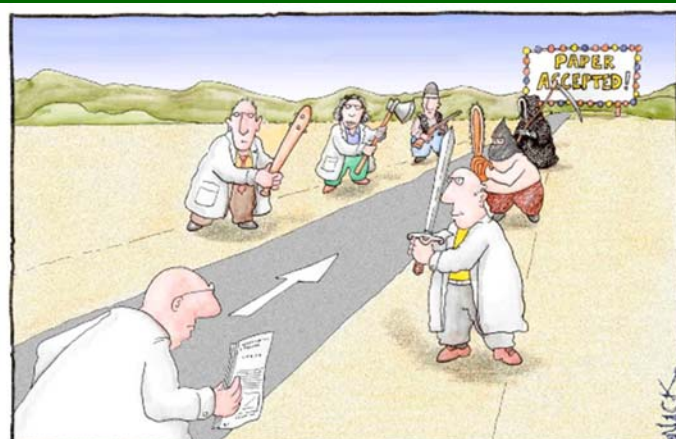
[Email rights for chick brood parasites](#)
Journal Name: The Auk Submitted Date: 01/19/2006
MS # 06-010 - Version 1 MS Status: MS Withdrawn

[HOST RECOGNITION OF BROOD PARASITES: IMPLICATIONS FOR METHODOLOGY IN STUDIES OF ENEMY RECOGNITION](#)
Journal Name: The Auk Submitted Date: 09/03/2004
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Odeslání do redakce

- pozor na časovou náročnost ...
- ... všeho



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Recenzní řízení

- pre-review assessment
- peer-review
- double-blind peer review
- presubmission enquiry (šetří čas)

Methods in
Ecology and Evolution



Papers must reach certain standards before referees are asked to consider them: submissions that are out of scope of the journal or do not match our criteria may be rejected without review. A member of the editorial team undertakes the pre-review assessment. Manuscripts that are not in the correct format, are too large or which cannot be downloaded and printed reliably, maybe also be returned to authors without review.

Proč jsou rukopisy odmítány?

- ignorování „Pokynů pro autory“

ESA Instructions for Authors - Mozilla Firefox

Soubor Úlohy Zobrazení Historie Záložky Vlastnosti Nápověda

ESA Instructions for Authors

esapubs.org/insp/bs/AuthorInstructions.html#

Formatting your manuscript: Minimum formatting requirements

Consult recent issues for examples of journal style. For purposes of review, submitted manuscripts need not adhere to journal style in every detail; however, preparation of final revisions of manuscripts accepted for publication will be easier if [ESA style](#) is followed from the outset. But be sure to abide by the following minimum formatting requirements for submitted manuscripts:

- * The entire manuscript must be double-spaced (text, quotations, figure legends, literature cited) at three lines per inch (12 lines/10 cm) with a 12-point font, Times New Roman. Choose the "double-spacing" option for line spacing. Leave a 1 inch (2.54-cm) margin on all sides of each page. Page size should be Letter 8 1/2" by 11". Do not justify the right margin.
- * Assemble the parts of the manuscript in this order: title page, abstract, key words, text, acknowledgments, literature cited, tables (one table per page), figure legends (on separate page preceding the first figure), figures (one figure per page; label each figure, i.e., Figure 1, Figure 2, etc.). Appendices for *Ecological Archives* should be in a separate file.
- * Number all pages (including tables, and figures), starting with the title page.
- * All pages of text should have line numbers as well.

Allowable file formats:

- Manuscript files in Word (.doc or .docx), WordPerfect (.wpd), Rich-text format (.rtf) or LaTeX (.TEX) format. (See [ESA-LaTeX](#) for some tips on getting your TEX document to conform to ESA style.)
- Tables in doc, xls, tds, or csv format (or Tables may be included in the manuscript file)
- Figures/Images in doc, jpeg, tif, gif, eps, ps, or ppt format (or Figures may be included in the manuscript file)



Proč jsou rukopisy odmítány?

- ignorování „Pokynů pro autory“
- formát (Czenglish, tabulky, grafy)
- nezajímavé téma (opakování známého)
- nevhodný design, malý vzorek
- chybná statistika
- „over-interpretation“
- zastaralé literární zdroje
- „cite more classical works“
- ignorování recenzentů

119 cuckoo chicks. We checked
120 stage to establish clutch
121 once or twice daily during



MS rejection ~ Blessing in disguise!

- recenzenti mají většinou pravdu
- problém = příležitost
- vylepšit MS



Biological Conservation 142 (2009) 1559

Contents lists available at ScienceDirect

Biological Conservation

journal homepage: www.elsevier.com/locate/biocon

ELSEVIER

Editorial

Why did we reject your paper?

Chyby při re-submitaci

- nepochopení, co recenzenti chtějí

High repeatability of foreign egg rejection by brood parasite hosts

I find the title a bit misleading, and you should consider changing it. Apparently, none of the two study species are/have been utilized by obligate brood parasites, and furthermore, evidence of conspecific brood parasitism is at best very scarce for

are/have been hosts of brood parasites? Also, not all your experiments yielded high repeatability (i.e. your conspecific song thrush group) in the statistical meaning

What is repeatability of foreign egg rejection by potential brood parasite hosts?

Repeatability of foreign egg rejection: testing the assumptions of co-evolutionary theory

Samaš et al. 2011: Ethology

Proč jsou rukopisy přijímány?

- význam výsledků (rozšiřují poznání)
- kvalita designu studie
- adekvátnost statistického zpracování
- stylistická úroveň



Selection criteria

The criteria for selection are: **work of outstanding importance, scientific excellence, originality and interest to a wide spectrum of biologists.**

All manuscripts are assigned to a specialist member of the Editorial Board, who assesses the paper for its suitability in *Proceedings B*, based on scientific quality, interest and importance and relevance to a broad readership. Many good papers are rejected at this stage, often on the ground of being insufficiently novel or too specialised, due to an extremely high competition for space.

If sent to peer review, the final decision will be made by an Editor, whose decision will be based on the reports received from the referees and/or Editorial Board members.



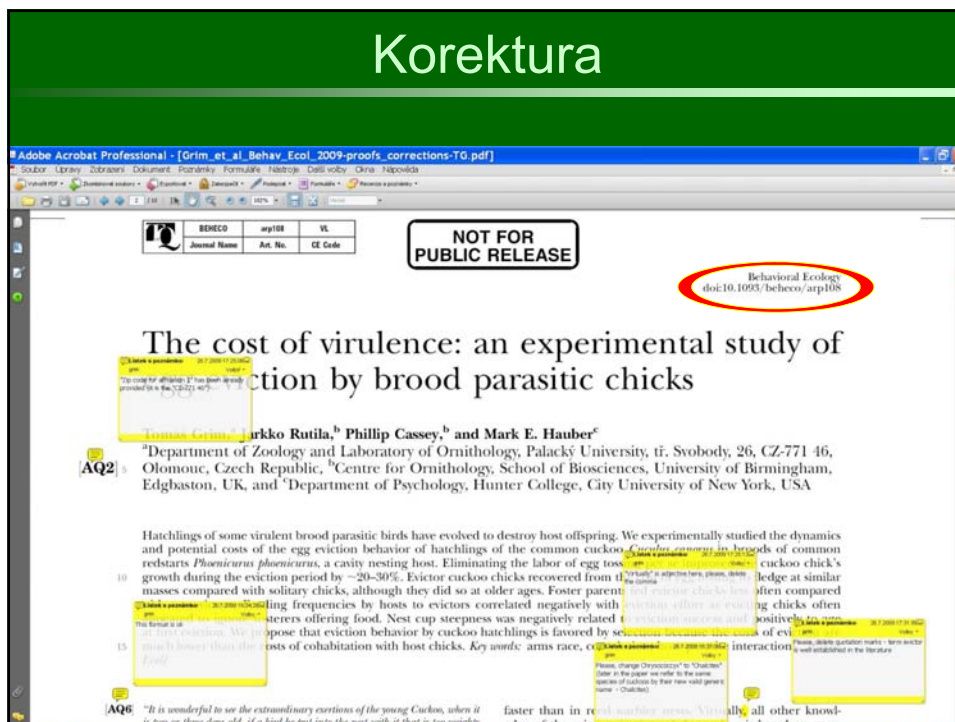
Přijetí článku = časově náročné!

- naivní představy vs. tvrdá realita
- zásadní pro doktorské práce!
- rejection rates ~60-80%
- recenzní řízení ~3 týdny~3 měsíce (a více!)
- poslat *nejméně* rok před obhajobou!!!



Smutná zkušenost vlastní a studentská

Korektura



Propagujte své publikace!

Current Biology Vol 18 No 17
R734

Dispatches

Evolutionary Biology: Arms Races in the Eye of the Beholder

Perceptual models of the avian visual system accurately predict the egg-rejection ability of species subject to the costly trickery of cuckoos and other brood parasites.

Rebecca J. Safran¹
and Maren N. Vitousek^{1,2}

colour and how the sensory system of the avian observer processes and

recorded the host eggs and cuckoos, including the importance of

- e-mail kolegům
- e-mail pomocníkům
- press release
- media reports
- popularizace

perceive — and the light environment in which they have to make behavioural decisions when addressing questions involving discrimination and the role of visual signaling. Importantly, the results [3,7] indicate that the discriminatory capabilities predicted by perceptual models more closely match the behavioural outcome of egg discrimination, providing compelling proof that perceptual models furnish accurate information about the visual acuity of these species. As such, both recent studies highlighted here [3,7] underscore the importance of using perceptual models to more precisely predict the dynamics of host-parasite arms races.

In other areas of evolutionary and behavioural ecology, perceptual modelling [8,10] has become state-of-the-art for understanding the use of colourful signals, not only limited to egg colour as described here [3,6,7], but also plumage colouration [9,13,14]. These retinal function models have now become widespread in use, and overall suggest very strongly that human perceptual differences are not



Figure 1. Finding cuckoo eggs in the nest. Top left: a cuckoo chick in a nest. Top right: a cuckoo chick in a nest. Bottom left: a cuckoo chick in a nest. Bottom right: a cuckoo chick in a nest.

Propagujte své publikace!

Tomáš Grim: Scientific publications - Mozilla Firefox

Search: Google, Bing, Yahoo, Ask, Hotmail, MSN, AOL, etc.

Scientific publications

Publications in international peer-reviewed journals

Short notes and book reviews in Czech and Slovak ornithological journals

Media reports on my research

Publications in international peer-reviewed journals

2011

Carey P., Thomas G. H., Portugal J. J., Mauer G., Hadwin M. E., Grim T., Lovell F. G., Møller A. P. 2012: Why are birds' eggs colourful? Eggshell pigments co-vary with the history and nesting ecology among British breeding non-passerine birds. *Biological Journal of the Linnean Society* (in press).

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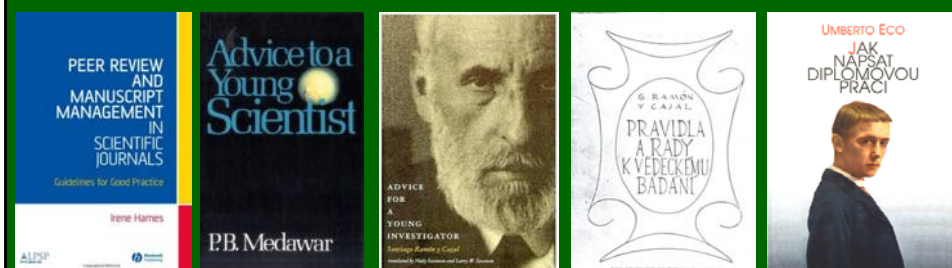
Grim T., Carey P., Green T., Greenwood D. R., Skudran C., Ruffa J. & Hadwin M. E. 2012: A phylogenetic analysis of avian brood-parasite egg colour mimicry. *Proceedings of the Royal Society of London Series B* (in press) (doi:10.1098/rspb.2012.1710).

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Užitečné zdroje informací



Užitečné zdroje informací



- <http://www.icmje.org/>
- <http://www.sfcedit.net/newsletters.htm>



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



Celkové poučení

Miřte slovem přesně	Forma (vědeckého) vyjadřování
Neberte si nic osobně	Kritika (kolegové, recenzenti:-)
Nevytvářejte si žádné domněnky	Explicitnost, teoret. modely (!)
Vždy dělejte vše, jak nejlépe dovedete	Sběr, analýza, interpretace dat a literatury
Bud'te skeptičtí, ale naslouchejte	Interpretace výsledků (cizích i vlastních!)

