

Curriculum vitae

Personal information

Name	Carsten Schradin
Address	Zoological Institute, Department of Animal Behavior, University of Zurich, Winterthurerstrasse 190, 8057 Zurich, Switzerland.
Phone	+41 – (0)44- 635 5486
e-mail	carsten.schradin@zool.unizh.ch
Date of birth	19.07.1972
Place of birth	Gaildorf (Germany)
Marital status	Married
Children	one
Nationality	German
Current position	Research assistant, Zoological Institute, Department of Animal Behavior, University of Zurich, Switzerland. Honorary Researcher at the School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa.

Major achievements

- 2001 – 2006: Establishment of the Succulent Karoo Research Station in South Africa.
- 2001 – 2006: Combination of field and laboratory work establishing the striped mouse as a recognised model for the study of paternal care, communal nesting and group living.
- 1998-2001: Establishment and organization of a graduate student meeting at the Anthropological Institute of the University of Zurich, enabling discussions and exchange of views between students. This institution still exists (2005).

Research interest

Integrative approach to social behavior, especially paternal care and group living. Combination of proximate and ultimate reasons of social behavior, including physiological, endocrine, ecological, demographic and evolutionary reasons.

Education

Since October 2005	Research assistant, Zoological Institute, Department of Animal Behavior, University of Zurich, Switzerland.
1 June 2004 – September 2005	Fellow of the Claude Harris Leon Foundation (Cape Town, South Africa).
June 2003 – May 2004	Grant of the German Science Foundation (DFG) for postdoctoral work in South Africa.
June 2001 – May	Grant of the Swiss National Science Foundation for postdoctoral

- 2003 work in South Africa.
- 19th April 2001 PhD in Anthropology (Dr. sc. nat).
Dissertation: „Paternal Care in New World Monkeys with Special Reference to the Goeldi’s Monkey (*Callimico goeldii*)“.
Under supervision of Dr. G. Anzenberger and Prof. Dr. R.D. Martin.
Examined by Prof. Dr. B. König (Zürich) and Dr. A.F. Dixson (San Diego).
- 1997-2001 PhD thesis at the Anthropological Institute, University Zurich, Switzerland.
- 1994-1997 Ludwig-Maximilians-University Munich (Germany); diploma in biology; main subject Zoology, minor subjects Anthropology, Ecology and Psychology.
Diploma thesis at the Max-Planck-Institute for Behavioural Physiology, Seewiesen (Germany). Title of the diploma thesis: “Sex-biases emigration in the shell-dwelling cichlid fish *Neolamprologus multifasciatus*: ultimate and proximate causes”.
Grade of the diploma: 1.0 (passed with distinction). Supervisor: Prof. Dr. Jürg Lamprecht
- 1992-1994 University Stuttgart Hohenheim (Germany); Vordiplom (corresponding to bachelor degree) in biology.
- 1992 High school certificate Abitur (corresponding to matric), grade 1.6 (grades in Germany range from 1 (best) to 4 (worst)).

Professional experience

- September 2001 to date Field studies in the Succulent Karoo of South Africa (Goegap Nature Reserve). Establishment of the Succulent Karoo Research Station, which in so far had been used by 21 undergraduate, 3 diploma and 1 PhD student, and visited by three co-researchers.
- October 2003 Invitation to the 92. Dahlem Conference in Berlin: „Attachment and Bonding: A New Synthesis“.
- June 2003 Visiting researcher at the University of Zurich and the Technical University of Zurich (Eidgenössischen Technischen Hochschule Zürich, ETH) for hormone measurements of striped mice.
- May – July 2002 Visiting researcher at the University of Zurich and the Technical University of Zurich (Eidgenössischen Technischen Hochschule Zürich, ETH) for hormone measurements of monkeys and striped mice.
- 1998-2001 Organization of a graduate student meeting at the Anthropological Institute of the University of Zurich, enabling discussions and exchange of views between students.
- 1999-2001 ISIS (International Species Information System) representative for the colony of Goeldi’s monkeys (*Callimico goeldii*) of the Anthropological Institute, University Zurich.
- August 2000 Field study on the pygmy marmoset (*Cebuella pygmaea*). Capture of

wild marmosets, collecting of hair samples and marking of the individual.
February 2000 University of California, Davis, USA. Research on hormonal correlates of paternal care in the titi monkey (*Callicebus moloch*), laboratory analysis.

Teaching

From September 2005 Member of the PhD evaluation committee of Tasmin Rymer (University of the Witwatersrand): “Paternal care in the striped mouse *Rhabdomys pumilio*: ontogeny and function.”
From July 2005 Supervising the PhD project of Melanie Schubert, University of Bayreuth, Germany (together with Prof. D. von Holst): “Monogamy in the round-eared elephant shrew.”
April 2005 Supervision of 10 undergraduate students from the University of the Witwatersrand during a one week field trip to Goegap Nature Reserve.
June 2004 to April 2005 Supervising projects of three diploma students from Germany, who collected data for their diploma thesis at my field site.
September 2001 to date Supervision of 21 undergraduate students (3 from South Africa and 18 from Germany), who worked as field assistants at my research station in the Goegap Nature Reserve.
2001 Lectures and practical in “Behavioural and Evolutionary Ecology“ (together with M. Whiting; University of the Witwatersrand).
2001 Lectures and practicals in “Verhalten der Primaten“. (behaviour of primates; University Zürich).
2001/01 Supervision of one graduate (diploma) student (together with R.D. Martin).
2000/01 Lectures in “Gesellschaftsformen der Primaten II“ (social organisation of primates; together with G. Anzenberger; University Zürich).
2000 Supervision of one graduate (diploma) student (together with G. Anzenberger).
2000 “Naturschutzbiologie der Primaten“ (conservation biology of primates; together with G. Anzenberger; University Zürich).
1999 Lectures and practicals in “Verhalten der Primaten“. (behaviour of primates; together with G. Anzenberger; University Zürich).
1998/99 Lectures in “Gesellschaftsformen der Primaten II“ (social organisation of primates; University Zürich).

Languages

German (mother tongue) and English.

EDP

Personal computer and Macintosh.

Funds raised for scientific equipment

Year	Organisation	Amount	Amount in US \$
2006	Holcim Foundation, Switzerland	19 000CHF	14 500
	Vontobel Foundaton, Switzerland	19 300 CHF	14 670
	National Geographic Foundation	17 500 US\$	17 500
2005	Ethologische Gesellschaft	165 Euro	196
2005	Research group, University of the Witwatersrand	25 000 ZAR	4 100
2005	Donations from the email newsletter <i>FSM-TIMES</i> .	1 000 Euro	1 200
2004	Ethologische Gesellschaft (Germany)	1 300 Euro	1690
2004	Research group, University of the Witwatersrand	25 000 ZAR	3 850
2004	Swiss Society for Natural Sciences	1 500 CHF	1 150
2002	Foundation for junior scientists of the University of Zurich, Switzerland	30 0000 CHF	23 000
2002	Equipment grant University of the Witwatersrand	35 000 ZAR	5 400
2002	Swiss National Science Foundation	3 000 CHF	2 300
2002	Swiss Society for Natural Sciences	1 262 CHF	980
2001	Swiss National Science Foundation	3 000 CHF	2 300
2001	Swiss Society for Natural Sciences	1 782 CHF	1 370
2001	A.H. Schultz Foundation, Zurich	5 000 CHF	3 840

Total: US \$ 98 046

Awards

2005: Fritz-Frank-Förderpreis for young scientists from the German Society of Mammalogists.

Publications and presentations

Publications (reviewed journals)

- Accepted or in press Schradin, C. in press. When to live alone and when to live in groups: ecological determinants of sociality in the African striped mouse (*Rhabdomys pumilio*, Sparrman, 1784). *Belgian Journal of Zoology*.
- Schradin, C. in press. No information transfer of food sites in a group living solitary forager. *Journal of Ethology*.
- Schradin, C., Schubert, M. & Pillay, N. in press. Huddling groups in winter: striped mice prefer few kin over many strangers. *Canadian Journal of Zoology*.
- 2006 Scantlebury, M., Pillay, N., Speakman, J.R., Bennett, N.C., & Schradin, C.. 2006. Huddling in groups leads to daily energy savings in free-living African four-striped grass mice *Rhabdomys pumilio*. *Functional Ecology* **20**, 166-173.
- Schradin, C. 2006. Whole day follows of the striped mouse. *Journal of Ethology* **24**, 37-43.
- Schradin, C. & Pillay, N. 2006. Female striped mice (*Rhabdomys pumilio*) change their home ranges in response to seasonal variation in food availability. *Behavioral Ecology* published online in February: doi: 10.1093/beheco/arj047
- 2005 Schradin, C. 2005. Nest side competition in diurnal rodents from the succulent karoo of South Africa: The striped mouse (*Rhabdomys pumilio*) against the bush karoo rat (*Otomys unisulcatus*). *Journal of Mammalogy* **86**, 757-765.
- Schradin, C. & Pillay, N. 2005. The influence of the father on offspring development in the striped mouse. *Behavioral Ecology* **16**, 450-455.
- Schradin, C. & Pillay, N. 2005. Demography of the striped mouse (*Rhabdomys pumilio*) in the succulent karoo: a unique population in an extreme environment. *Mammalian Biology*. **70**, 84-92.
- Schradin, C. & Pillay, N. 2005. Intraspecific variation in the spatial and social organization of the African striped mouse. *Journal of Mammalogy* **86**, 99-107.
- 2004 Schradin, C. 2004. Territorial defence in a group living solitary forager: who, where against whom? *Behavioural Ecology and Sociobiology* **55**, 439-446.
- Schradin, C. & Anzenberger, G. 2004. Development of prolactin levels in marmoset males: from helper to first-time father. *Hormones and Behavior* **46**, 670-677.
- Schradin, C. & Pillay, N. 2004. Prolactin levels in paternal striped mouse (*Rhabdomys pumilio*) fathers. *Physiology & Behavior* **81**, 43-50.
- Schradin, C. & Pillay, N. 2004. The striped mouse from the succulent karoo of South Africa: A territorial group living solitary forager with communal breeding and helpers at the nest. *Journal of Comparative Psychology*, **118**, 37-47.
- 2003 Schradin, C. & Anzenberger, G. 2003. Mothers, not fathers, determine the

- delayed onset of male carrying in Goeldi's monkey (*Callimico goeldii*). *Journal of Human Evolution* **45**, 389-399.
- Schradin, C. & Pillay, N. 2003. Paternal care in the social and diurnal striped mouse (*Rhabdomys pumilio*): laboratory and field evidence. *Journal of Comparative Psychology*, **117**, 317-324.
- Schradin, C., Reeder, D., Mendoza, S. & Anzenberger, G. 2003. Prolactin and paternal care: comparison of three species of monogamous New World monkeys (*Callicebus cupreus*, *Callithrix jacchus*, and *Callimico goeldii*). *Journal of Comparative Psychology*, **117**, 166-175.
- 2002 Schradin, C. & Lamprecht, J. 2002. Female emigration in the group living cichlid fish *Neolamprologus multifasciatus*. *Ethology*, **108**, 237-248.
- 2001 Schradin, C. & Anzenberger, G. 2001. Costs of infant carrying in common marmosets, *Callithrix jacchus*: an experimental analysis. *Animal Behaviour*, **62**, 289-295.
- Schradin, C. & Anzenberger, G. 2001. Infant carrying in family groups of Goeldi's monkeys (*Callimico goeldii*). *American Journal of Primatology*. **53**, 57-67.
- 2000 Schradin, C. 2000. Confusion effect in a reptilian and a primate predator. *Ethology*, **106**, 691-700.
- Schradin, C. & Lamprecht, J. 2000. Female-biased immigration and male peace keeping in groups of the shell-dwelling cichlid fish *Neolamprologus multifasciatus*. *Behavioural Ecology and Sociobiology*, **48**, 236-242. [Research report by *Nature* about Schradin & Lamprecht, 2000: <http://www.nature.com/nsu/000000803/000803-1.html>]
- 1999 Schradin, C. & Anzenberger, G. 1999. Prolactin, the hormone of paternity. *News in Physiological Sciences*, **14**, 223-231.

Non-reviewed papers and book chapters (abstracts are excluded)

- Leckman, J. F., Carter, C. S., Hennessey, M. B., Hrdy, S. B., E.B. Kervene, Klann-Delius, G., Schradin, C., Todt, D. & Holst, D. v. 2005. Biobehavioral processes in attachment and bonding. In: *Attachment and Bonding: A New Synthesis. Dahlem Workshop Report 92* (Ed. by C.S. Carter and L. Ahnert). Cambridge, MA: The MIT Press.
- Schradin, C. 2002. Die vier Fragen Tinbergens und väterliches Verhalten. In: *Gruppenmechanismen* (Ed. U. Ganslöber). Filander Verlag, Fürth.
- Schradin, C. 2001. Prolaktin, das Elternhormon. *Praxis der Naturwissenschaften: Biologie in der Schule*. **5**, 24-30.
- Schradin, C. 1998. Intraspezifische Konkurrenz. Translation from English into German. In: *Ökologie, Begon, M.E., Harper, J.L. & Townsend, C.R. (Eds.): Spektrum Verlag, Heidelberg*, pp. 139-204.
- Schradin, C. 1992. Vorschlag zur Katalogisierung einer Sammlung. *Entomologische Zeitschrift*, **102**, 318-319.
- Schradin, C. & Anzenberger, G. 2002. Why do New World monkey fathers have enhanced prolactin levels? *Evolutionary Anthropology (Supplement)*, **1**, 122-125.

Submitted for publication

- Hoffmann, M., Schradin, C. & Geisman, T. subm. Radiographic evaluation of neonatal skeletal development in *Callimico goeldii* reveals closer similarity to *Callithrix jacchus* than to *Saguinus oedipus*.
- Schradin, C., Krackow, S., Schubert, M., Keller, C., Schradin, B. & Pillay, N. Regulation of activity pattern in desert-living striped mice: The importance of basking.
- Schradin, C., Pillay, N., Bennett, N.C., Krackow, S., & Scantlebury, M. In prep. Basking reduces endothermic energy demands in desert-living striped mice.

Publications in preparation

- Keller, C. & Schradin C. in prep. Do small mammals influence plant biodiversity in the succulent karoo, a biodiversity hotspot?
- Schubert, M. & Schradin, C. In prep. Parental and alloparental care in polygynous groups of striped mice (*Rhabdomys pumilio*).
- Schradin, C. & Pillay, N. in prep. Parasite load in striped mice: Population differences reflect differences in sociality.
- Schradin, C. & Schneider, C. in prep. Sexual suppression in male striped mice: data on proximate mechanisms from the field and laboratory.
- Schradin, C. & Schneider, C. in prep. Male aggression in striped mice: seasonal and regional factors.
- Schradin, C., Schubert, M. & Pillay, N. in prep. Litter size adjustment in free living striped mice.

Popular science (most in German)

- 2004 - SGM-Spiegel (in German) and FSM-Times (in English), free popular science present email newsletter providing information about the projects at the *Succulent Karoo Research Station*: www.strippedmouse.com. So far 6 issues were published.
- 2006 Schradin, C. in press. Die Biologie des Vaters: Was uns die Verhaltensforschung über Väter berichten kann. (The biology of the father: insights from behavioral biology). Filander Verlag, Fürth, Germany. Popular science book.
- Schradin, C. 2006. Die Elefantenspitzmaus – die kleine Verwandte der grauen Riesen. (Elephant shrews – the small relatives of the grey giants). *Rodentia* **30**.
- 2005 Schradin, C. 2005. Im Jahr der Maus. Teil 2: Das Leben von Striemengrasmaus-Weibchen Nr. 23. (In the year of the mouse. Part II: The life of striped mouse female No. 23). *Rodentia* **25**, pp. 28-30.
- Schradin, C. 2005. Im Jahr der Maus. Teil 1: „Kindheit und Jugend“ von Striemengrasmaus-Weibchen Nr. 23. (In the year of the mouse. Part I: Childhood of striped mouse female No. 23). *Rodentia* **24**, 41-43.
- Schradin, C. 2005. Namaqualand: Ein Biodiversitäts- und Kleinsäugerhotspot. (Namaqualand: A biodiversity and small mammal hotspot). *Rodentia* **23**, 26-30.

Popular reports about my research projects

- 2005 Wiedon, A. Fürsorglich und Flexible; Die Striemengrasmaus. (Caring and

- flexible: the striped mouse). *Biologie in unserer Zeit* **35**, 226-227.
- Vaterliebe nach Bedarf. (Paternal love on demand) *Horizonte* (magazine of the Swiss National Science Foundation), March, p. 8. Report about Schradin & Pillay 2005, *Behavioral Ecology* **35**, 266-267.
- 2001 Papa wartet. (Daddy is waiting). National Geographic Germany, October, p. 14. Report about my research on Goeldi's monkeys (*Callimico goeldii*).
- 2000 Research report by *Nature* about Schradin & Lamprecht, 2000: <http://www.nature.com/nsu/000000803/000803-1.html>.

Presentations

- 2006 Schradin, C. 20. June 2006. Social flexibility in the striped mouse: When to live in groups and when to live alone. Invited talk, Biological Institute, Humboldt University of Berlin, Germany.
- Schradin, C. 19. May 2006. Social flexibility in the striped mouse: When to live in groups and when to live alone. Invited talk, Zoological Institute, University of Zurich, Switzerland.
- Schradin, C. 19. April 2006. Social flexibility in the African striped mouse: When to be paternal and when to search for mates. Invited talk, Department of Behavioral Ecology, University of Bern, Switzerland.
- 2005 Schradin, C. & Pillay, N. Paternal care in the African striped mouse: a flexible and adaptive strategy. *XXVIII International Ethological Conference, Budapest, Hungary*.
- 2004 Schradin, C. & Pillay, N. Ecological changes over years lead to social changes: from groups to solitariness to groups. Talk, *Second European Conference on Behavioural Ecology, Groningen, Netherlands*.
- Schradin, C. When to live in groups and when to live alone: answers from the striped mouse. Talk, *School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Johannesburg, South Africa*.
- 2003 Schradin, C. & Pillay, N. Social flexibility in the South African striped mouse (*Rhabdomys pumilio*): when to live alone and when to live in groups? Talk, *9th African Small Mammal Symposium, Morogoro, Tanzania*.
- Schradin, C. Namaqualand – in the land of mice. Video presentation, *9th African Small Mammal Symposium, Morogoro, Tanzania*.
- Schradin, C. & Pillay, N. Social flexibility in the South African striped mouse (*Rhabdomys pumilio*): when to live alone and when to live in groups? Talk, *Conference of the Zoological Society South Africa, Cape Town, South Africa*.
- Schradin, C. & Pillay, N. Social flexibility in the South African striped mouse (*Rhabdomys pumilio*): when to live alone and when to live in groups? Talk, *Meeting of the German Zoological Society, Berlin, Germany*.
- Schradin, C. Namaqualand – in the land of mice. Video presentation, *Meeting of the German Zoological Society, Berlin, Germany*.
- Schradin, C. Extreme soziale Flexibilität bei der südafrikanischen Striemengrasmaus (*Rhabdomys pumilio*): mal allein, mal vereint! Talk,

- Institute of Behavioural Biology, University Zurich, Switzerland.*
- 2002 Schradin, C. Namaqualand – in the land of mice. Video presentation, *First European Conference on Behavioural Ecology, Münster, Germany.*
- Schradin, C. Namaqualand – in the land of mice. Video presentation, *Anthropological Institute, University Zurich, Switzerland.*
- Schradin, C. The socio-ecology of the striped mouse from the succulent karoo of South Africa. Talk, *Institute of Behavioural Biology, University Zurich, Switzerland.*
- Schradin, C. & Pillay, N. The four-striped mouse as a model for studying paternal care in mammals. Poster, *First European Conference on Behavioural Ecology, Münster, Germany.*
- 2001 Schradin, C. Väterliches Verhalten beim Springtamarin (*Callimico goeldii*) im Vergleich zum Weissbüscheläffchen (*Callithrix jacchus*). *Anthropologisches Institut, Universität Zürich, Switzerland.*
- Schradin, C. Väterliches Verhalten beim Springtamarin (*Callimico goeldii*) im Vergleich zum Weissbüscheläffchen (*Callithrix jacchus*). *Verhaltensbiologisches Institut, Universität Münster, Germany.*
- Schradin, C. Paternal care in Goeldi's monkeys (*Callimico goeldii*). *School of Animal, Plant and Environmental Sciences, University of the Witwatersrand, South Africa.*
- Schradin, C. Paternal infant carrying in Goeldi's monkeys (*Callimico goeldii*): Why starts it so late? *Graduiertentreffen der Studiengruppe Evolutionsbiologie der DZG, Bielefeld, Germany.*
- Schradin, C. Hormone und Jungenaufzucht. *VHS-Zürich, Switzerland.*
- Schradin, C. Was Hormone sind und wie sie wirken. *VHS-Zürich, Switzerland.*
- Schradin, C. Wie Fisch sich einen Harem hält: Männliche Friedensstifter beim Schneckenbuntbarsch (*Neolamprologus multifasciatus*). *Institut für Verhaltensbiologie, Universität Zürich, Switzerland.*
- Schradin, C. & Anzenberger, G. Prolactin and paternal care in New World monkeys. *ASAB Easter Meeting, Chester College, UK.*
- Schradin, C., Reeder, D. M., Mendoza, S. P., Anzenberger. Prolactin and paternal care in New World monkeys. *XXVII International Ethological Conference, Tübingen, Germany.*
- 2000 Schradin, C. & Anzenberger, G. Paternal infant carrying in Goeldi's monkeys (*Callimico goeldii*): Why starts it so late? *17. Ethologentreffen, Utrecht, Netherlands.*
- Schradin, C. & Anzenberger, G. Costs of infant care in common marmosets (*Callithrix jacchus*): Reduction of the leaping distance due to infant carrying. *International Behavioral Ecology Congress, Zürich, Switzerland.* (Poster)
- Schradin, C. & Anzenberger, G. Measurement of Prolactin in Urine. *European Marmoset Research Group, Paris, France.*
- Schradin, C. & Anzenberger, G. Paternal care in Goeldi's monkeys, *Callimico goeldii*. *University of California, Davis, Psychology Department, USA.*
- Schradin, C. & Anzenberger, G. Paternal care in Goeldi's monkeys, *Callimico goeldii*. *University of California, Davis, Primate Seminar, USA.*

- 1999 Schradin, C. Regulation väterlichen Verhaltens. *Workshop Gruppenmechanismen, Max-Planck-Institute for Behavioral Physiology Seewiesen, Germany.*
- Schradin, C. & Anzenberger, G. Paternal care in Goeldi`s monkeys: its endocrinology and motivational development. *XXVI International Ethological Conference, Bangalore, India.*
- Schradin, C. & Anzenberger, G. Prolactin and paternal care in clawed New World monkeys. *Centenary Congress of the Anthropological Institute and Museum in Zürich 1899-1999, Switzerland.*
- Schradin, C. & Anzenberger, G. Measuring prolactin in the urine of common marmosets. *European Marmoset Research Group, Swiss Seminar 1999, Zürich, Switzerland.*
- 1998 Schradin, C. Prolaktin, das Elternhormon. *Workshop Gruppenmechanismen, Max-Planck-Institute for Behavioral Physiology Seewiesen, Germany.*
- Schradin, C. & Lamprecht, J. Sex-biased immigration in the shell-dwelling cichlid fish *Neolamprologus multifasciatus*. *16. Ethologentreffen, Halle, Germany.* (Poster)

References

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