

Curriculum Vitae:

Prof. Matteo Griggio, PhD

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Position: Associate Professor, Department of Biology, University of Padova, Italy

- Date of birth: 6th September 1976
- Nationality: Italian

Spoken Languages: Italian (mother tongue), English (fluent)

Postdoctoral positions & Education

- Tenure Track Fellowship Associate Professor (RTD B) 2014 – 2017, University of Padova.
- Post-Doc 2007 – 2013: Sexual selection, condition-dependent mate preferences and female quality. Konrad Lorenz Institute for Ethology, Vienna.
- Post-Doc 2006 – 2007: Project on multiple traits and sexual selection. University of Padova.
- Ph.D in Evolutionary Biology (2006), University of Padova, Italy. Dissertation title: Sexual conflict, mating strategies and honest indicators of mate quality in the rock sparrow (*Petronia petronia*), (in English).
- MS in Natural Sciences (2002), University of Padova. M.S. Thesis: Female ornamentation and male mating strategies in the Rock sparrow (*Petronia petronia*). Data collected over three breeding seasons.

National and International scientific awards

2018 TOP 20 BEST REFEREES FOR BEHAVIORAL ECOLOGY, Oxford University Press (2017).

2013 INTERNATIONAL AWARD: 7th BioMed Central Annual Research Awards -Excellence in Open Access Research- For the paper: Mahr K., **Griggio M. ***, Granatiero M., Hoi H. (2012) Female attractiveness affects paternal investment: experimental evidence for male differential allocation in blue tits. *Frontiers in Zoology*, 9:14. **(Category: Animal Science, Veterinary Research and Zoology Award, runner-up).**

2010 INTERNATIONAL AWARD: «Mario Benazzi e Giuseppina Benazzi Lentati», best young Evolutionary biologist in Zoology (International Award). (10000 €) – **Accademia Nazionale dei Lincei.**

2007 NATIONAL AWARD: «Maria Teresa e Alessandro Ghigi», best young Italian Zoologist. (2500 €) – **Accademia delle Scienze dell'Istituto di Bologna.**

2003 NATIONAL AWARD: «Marco Marchesini», best Italian master thesis in Ethology. (1000 €) – **Istituto Veneto di Scienze, Lettere ed Arti.**

Research Interests

- Breeding biology, mating strategies and parental investment
- Multiple signals and ornament-armament model
- Male mate choice and female quality
- Female condition and variation in female mate choice
- Sexual selection and plumage colours
- Sexual conflict over parental care
- Social behaviour in birds and fish
- Wildlife management and conservation

Research Summary

My research has focused primarily on the use of visual signals (plumage colours) in communication by birds (both intrasexual and intersexual selection). Based on recent studies a hypothesis has been developed to explain the evolution of female ornaments independently of male showiness. Female ornamentation could be influenced by sexual selection through direct male choice or female-female competition, even apart from the classical case of sex-role reversed species. Moreover, female phenotypes may influence the result of the mate choice because the direct costs and benefits of mating with certain males vary among females. Condition-dependent variation in mate choice may have important evolutionary implications, not only within a population but also between populations. There are relatively few experiments to address how condition and/or genotype influences female mate choice decisions. Using different study species I am investigating these two areas of sexual selection. My research focuses also on parental investment involving negotiation between the sexes and how social birds and social fishes live and interact together, forming complex relationships and social structure (throughout the use of social network analysis).

Scientific contributions: Bibliometric indicators (April 2018)

Peer-reviewed scientific articles (ISI-ranked journals): **71**

Citations: **1524** (Google Scholar), **1188** (Scopus), **1201** (WoS)

H-index: **24** (Google Scholar), **23** (Scopus), **22** (WoS)

Scientific contributions: list of papers

Co-author of 72 Articles International Peer Reviewed (including in press ones), 48 of which as first, last and/or corresponding author (67%). (* = Corresponding author).

1. **Griggio, M. ***, Hamerstrom, F., Rosenfield, R.N., Tavecchia, G. (2002). Seasonal variation on the sex ratios of fledgling American kestrels: a long term study. ***Wilson Bulletin (now: Wilson Journal of Ornithology)***, 114: 474-478.
2. Matessi, G., **Griggio, M.**, Pilastro, A. (2002). The geographical distribution of populations of the large-billed subspecies of reed bunting matches that of its main winter food. ***Biological Journal of the Linnean Society***, 75: 21-26.
3. Pilastro, A., **Griggio, M.**, Biddau, L., Mingozi, T. (2002). Extrapair paternity as a cost of polygyny in the rock sparrow: Behavioural and genetic evidence of the 'trade-off' hypothesis. ***Animal Behaviour***, 63: 967-974.
4. **Griggio, M.**, Matessi, G., Pilastro, A. (2003). Male rock sparrow (*Petronia petronia*) nest defence correlates with female ornament size. ***Ethology***, 109: 659-669.
5. Pilastro, A., **Griggio, M.**, Matessi, G. (2003). Male rock sparrows adjust their breeding strategy according to female ornamentation: parental or mating investment? ***Animal Behaviour***, 66: 265-271.
6. **Griggio, M. ***, Tavecchia, G., Biddau, L., Mingozi, T. (2003). Mating strategies in the Rock Sparrow *Petronia petronia*: the role of female quality. ***Ethology, Ecology & Evolution***, 15: 389-398.
7. **Griggio, M. ***, Matessi, G., Marin, G. (2004). No evidence of extra-pair paternity in a colonial seabird, the common tern (*Sterna hirundo*). ***Italian Journal of Zoology***, 71: 219-222.
8. **Griggio, M.**, Matessi, G., Pilastro, A. (2005). Should I stay or should I go? Female brood desertion and male counter-strategy in rock sparrows. ***Behavioral Ecology***, 16: 435-441.
9. **Griggio, M.**, Valera, F., Casas, A., Pilastro, A. (2005). Males prefer ornamented females: a field experiment of male choice in the rock sparrow. ***Animal Behaviour***, 69: 1243-1250.
10. **Griggio, M. ***, Hoi, H. (2006). Is preening behaviour sexually selected? An experimental approach. ***Ethology***, 112: 1145-1151.
11. Serra, L., **Griggio, M.**, The role of molt in the development of sexual ornaments in the Rock Sparrow. ***Journal of Ornithology***, 147: 150-151.

12. **Griggio, M. ***, Serra, L., Licheri, D., Monti, A., Pilastro, A. (2007). Armaments and ornaments in the rock sparrow: a possible dual utility of a carotenoid-based feather signal. ***Behavioral Ecology & Sociobiology***, 61: 423-433.
13. Serra, L., **Griggio, M.**, Licheri, D., Pilastro, A. (2007). Moulting speed constrains the expression of a carotenoid-based sexual ornament. ***Journal of Evolutionary Biology***, 20: 2028-2034.
14. **Griggio, M. ***, Pilastro, A. (2007). Sexual conflict over parental care in a species with female and male brood desertion. ***Animal Behaviour***, 74: 779-785.
15. **Griggio, M. ***, Venuto, G. (2007). Relationship between mate guarding and brood desertion in the Rock Sparrow *Petronia petronia*. ***Ethology, Ecology & Evolution***, 19: 175-182.
16. **Griggio M. ***, Mingozzi T., Bortolin F., Pilastro, A. (2008). Trade-off between sexual activities and parental care: an experimental test using handicapped mates. ***Ethology, Ecology & Evolution***, 20: 155-164.
17. Hoi H., **Griggio M. *** (2008). Dual utility of a melanin-based ornament in bearded tits. 2008. ***Ethology***. 114, 1094-1100.
18. **Griggio, M. ***, Morosinotto C., Pilastro A. 2009. Nestlings' carotenoid feather ornament affects parental allocation strategy and reduces maternal survival. ***Journal of Evolutionary Biology***, 22: 2077-2085.
19. Matessi G., Carmagnani C., **Griggio M.**, Pilastro, A. (2009) Male rock sparrows differentially allocate nest defence but not food provisioning to offspring. ***Behaviour***, 146: 209-223.
20. Girardello M., **Griggio M.**, Whittingham M.J., Rushton S.P. (2009). Identifying important areas for butterfly conservation in Italy. ***Animal Conservation***, 12: 20-28.
21. **Griggio, M.**, Serra, L., Licheri, D., Campomori, C., Pilastro, A. (2009). Moulting speed affects structural feather ornaments in the blue tit. ***Journal of Evolutionary Biology***, 22: 782-792.
22. **Griggio, M. ***, Devigili, A., Hoi, H., Pilastro, A. (2009). Female ornamentation and directional male mate preference in the rock sparrow. ***Behavioral Ecology***, 20: 1072-1078.
23. **Griggio, M. ***, Zanollo, V., Hoi, H. (2010). UV plumage color is an honest signal of quality in male budgerigars. ***Ecological Research***, 25: 77-82.

24. Girardello M., **Griggio M.**, Whitthigham M.J., Rushton S.P. (2010). Models of the climate associations and distributions of amphibians in Italy. ***Ecological Research***, 25: 103-111.
25. **Griggio, M. ***, Zanollo, V., Hoi, H. (2010). Female ornamentation, parental quality and competitive ability in the rock sparrow. ***Journal of Ethology***, 28: 455-462.
26. **Griggio, M. ***, Hoi H., Pilastro A. (2010). Plumage maintenance affects ultraviolet colour and female preference in the budgerigar. ***Behavioural Processes***, 84: 739-744.
27. Serra, L., Pirrello, S., Licheri, D., **Griggio, M.**, Pilastro, A. (2010). Sex-dependent response of primary moult to simulated time constraints in the rock sparrow *Petronia petronia*. ***Journal of Avian Biology***, 41: 327-335.
28. **Griggio, M. ***, Hoi, H. (2010). Only females in poor condition display a clear preference and prefer males with an average badge. ***BMC Evolutionary Biology***, 10: 261.
29. Hoi, H., Tost, H. & **Griggio, M. *** (2011). The effect of breeding density and male quality on paternity-assurance behaviours in the house sparrow, *Passer domesticus*. ***Journal of Ethology***, 29: 31-38.
30. **Griggio, M. ***, Serra L., Pilastro, A. (2011). The possible effect of dirtiness on structurally based ultraviolet plumage. ***Italian Journal of Zoology***, 78: 90-95.
31. Hoi, H., **Griggio, M. *** (2011). Is female mate preference based on the interaction between static and dynamic signals in bearded reedlings? ***Ethology Ecology & Evolution***, 23: 171-178.
32. **Griggio, M. ***, Valera, F., Casas-Crivillé, A., Hoi, H., Barbosa, A. (2011). White tail markings are an indicator of quality and affect mate preference in rock sparrows. ***Behavioral Ecology and Sociobiology*** 65: 655-664.
33. **Griggio M. ***, Biard C, Penn D.J., Hoi H. (2011). Female house sparrows "count on" male genes: experimental evidence for MHC-dependent mate preference in birds. ***BMC Evolutionary Biology***, 11: 44.
34. Toth Z., **Griggio M. *** (2011). Leaders Are More Attractive: Birds with Bigger Yellow Breast Patches Are Followed by More Group-Mates in Foraging Groups. ***PLOS ONE***, 6: e26605.
35. **Griggio M. ***, Hoi H. (2011). An experiment on the function of the long-term pair bond period in the socially monogamous bearded reedling. ***Animal Behaviour***, 82: 1329-1335.

36. Crowhurst C.J., Zanollo V., **Griggio M.**, Robertson J., Kleindorfer S. (2012). White Flank Spots Signal Feeding Dominance in Female Diamond Firetails, *Stagonopleura guttata*. ***Ethology***, 118: 63-75.
37. Serra L., Pirrello S., Caprioli M., **Griggio M.**, Andreotti A., Romano A., Pilastro A., Saino N., Sacchi R., Galeotti P., Fasola M., Spina F., Rubolini D. (2012). Seasonal decline of offspring quality in the European starling *Sturnus vulgaris*: an immune challenge experiment. ***Behavioral Ecology and Sociobiology***, 66: 697-709.
38. Hoi H., **Griggio M.** * (2012). Bearded Reedlings Adjust Their Pair-Bond Behaviour in Relation to the Sex and Attractiveness of Unpaired Conspecifics. ***PLOS ONE***, 7: e32806.
39. Zanollo V., **Griggio M.** *, Robertson J. & Kleindorfer S. (2012) The number and coloration of white flank spots predict the strength of a cutaneous immune response in female Diamond Firetails, *Stagonopleura guttata*. ***Journal of Ornithology***, 153: 1233-1244.
40. Mahr K., **Griggio M.** *, Granatiero M., Hoi H. (2012) Female attractiveness affects paternal investment: experimental evidence for male differential allocation in blue tits. ***Frontiers in Zoology***, 9:14.
41. Ján K., Darolová A., **Griggio M.**, Majtán J., Okuliarová M., Zeman M., Lenka Z., Hoi H. (2013) Does egg colouration signal female and egg quality in reed warbler (*Acrocephalus scirpaceus*)? ***Ethology Ecology & Evolution***, 25: 129-143.
42. Colombelli-Négrel, D., Hauber, M.E., Robertson, J., Sulloway, F.J., Hoi, H., **Griggio, M.**, Kleindorfer, S. (2012) Embryonic learning of vocal passwords in superb fairy-wrens reveals intruder cuckoo nestlings. ***Current Biology***, 22: 2155-2160.
43. Hettyey A., **Griggio M.**, Mann M., Raveh S., Schaedelin F.C., Thonhauser K.E., Thoß M., van Dongen W.F.D., White J., Zala S.M., Penn D.J. (2012). Peerage of Science: will it work? ***Trends in Ecology & Evolution*** 27: 189-190.
44. Kleindorfer, S., Evans, C., Mihailova, M., Colombelli-Négrel, D., Hoi, H., **Griggio, M.**, Mahr, K. & Robertson, J. (2013) When subspecies matter: resident Superb Fairy-wrens (*Malurus cyaneus*) distinguish the sex and subspecies of intruder birds. ***Emu***, 113 (*In press*).
45. Zanollo V., **Griggio M.** *, Robertson J. & Kleindorfer S. (2013) Males with a faster courtship display have more white spots and higher pairing success in the diamond firetail, *Stagonopleura guttata*. ***Ethology***, 119: 344-352.

46. Kleindorfer S., Evans C., Colombelli-Négrel D., Robertson J., **Griggio M.** & Hoi H. (2013) Host response to cuckoo song is predicted by the future risk of brood parasitism. **Frontiers in Zoology**, 10:30.
47. Poláček M., **Griggio M.**, Bartíková & Hoi H. (2014). Nest sanitation as the evolutionary background for egg ejection behaviour and the role of motivation for object removal. **PLOS ONE**, 8: e78771
48. Zanollo V., **Griggio M.** *, Myers S., Robertson J., Stangoulis J., Guild G. & Kleindorfer S. (2013). Maternal investment in the Diamond Firetail: Female spot number predicts egg volume and yolk lutein. **Acta Ornithologica**, 48: 253-261.
49. Toth Z., Baldan D., Hoi H. & **Griggio M.** * (2014) Food reduction has a limited effect on following relations in house sparrow flocks. **Animal Behaviour**, 90: 91-100
50. Zanollo V., **Griggio M.** *, Robertson J. & Kleindorfer S. (2014) Assortative Pairings in Diamond Firetails (*Stagonopleura guttata*) are not the Result of Mutual Mate Choice for an Ornament. **Ethology**, 120: 951-964.
51. Hettyey A., Vagi B., Kovacs T., Ujszegi J., Katona P., Szederkenyi M., Pearman P.B., **Griggio M.**, Hoi H. (2014). Reproductive interference between *Rana dalmatina* and *Rana temporaria* affects reproductive success in natural populations. **Oecologia**, 176: 457-464.
52. Garcia-Navas V., Valera F., **Griggio M.** * (2015) Nest decorations: an 'extended' female badge of status? **Animal Behaviour**, 99: 95-107.
53. **Griggio M.** * (2015) An experimental test on time constraint and sexual conflict over parental care. **Ecology and Evolution** 5: 3622-3627.
54. Toth Z., Baldan D., Albert C., Hoi H. & **Griggio M.** (2016) Effect of ornament manipulations on following relations in male bearded reedlings. **Ethology Ecology & Evolution** 28: 175-187. DOI:10.1080/03949370.2015.1030782.
55. **Griggio M.** *, Hoi H, Lukasch B., Pilastro A. (2016). Context-dependent female preference for multiple ornaments in the bearded reedling. **Ecology and Evolution** 6: 493-501. doi: 10.1002/ece3.1903.
56. Mahr K., Evans C., Thonhauser K.E., **Griggio M.**, Hoi H. (2016). Multiple Ornaments—Multiple Signaling Functions? The Importance of Song and UV Plumage Coloration in Female Superb Fairy-wrens (*Malurus cyaneus*). **Frontiers in Ecology and Evolution** 4:43. DOI: 10.3389/fevo.2016.00043.

57. Hettyey A., Thonhauser K.E., Bókony V., Penn D.J., Hoi H. & **Griggio M.** (2016). Naive tadpoles do not recognize recent invasive predatory fishes as dangerous. ***Ecology*** 97: 2975-2985. DOI: 10.1002/ecy.1532.
58. **Griggio M.***, Fracasso G., Mahr K., Hoi H. (2016). Olfactory assessment of competitors to the nest site: an experiment on a passerine species. ***PloS One*** 11 (12), e0167905.
59. Pirrello S., Pilastro A., Rubolini D., Cecere J., Romano A., Andreotti A., Volponi S., Saino N., **Griggio M.** & Serra L. (2017). Early exposure to a bacterial endotoxin advances the onset of moult in the European starling. ***Journal of Avian Biology*** 48, 362-370 DOI: 10.1111/jav.01017.
60. Assandri G., Giacomazzo M., Brambilla M., **Griggio M.**, Pedrini P. (2017). Abundance, nest-site selection and breeding success of birds nesting on vines: management implications for conservation in a highly intensive farming system. ***Biological Conservation*** 205:23-33.
61. Poláček M., **Griggio M*.**, Mikšík I., Bartíková M., Eckenfellner M., Hoi H. (2017). Eggshell coloration and its importance in post mating sexual selection. ***Ecology and Evolution*** 7: 941-949.
62. Toth Z., Tuliozi B., Baldan D., Hoi H., **Griggio M.*** (2017). Social facilitation limits the exploitation of multiple hidden food patches in a bird species. ***Scientific Reports*** 7, 816.
63. Cattelan S, Lucon-Xiccato T, Pilastro A, **Griggio M.** (2017). Is the mirror test a valid measure of fish sociability? ***Animal Behaviour*** 127, 109-116.
64. Kabasakal B., Poláček M., Aslan A., Hoi H., Erdoğan A., **Griggio M.*** (2017). Sexual and non-sexual social preferences: sexy strangers for females and ugly friends for males. ***Scientific Reports*** 7.
65. Lucon-Xiccato T., **Griggio M.** (2017). Shoal sex composition affects exploration in the Mediterranean killifish. ***Ethology*** 123, 818-824.
66. Lucon-Xiccato T., Mazzoldi C., **Griggio M.** (2017). Sex composition modulates the effects of familiarity in new environment. ***Behavioural Processes*** 140, 133-138.
67. Aslan A., Bekir K., **Griggio M.**, Erdoğan A. The breeding biology of the White-spectacled Bulbul, *Pycnonotus xanthopygos*, at the northwestern edge of its distribution range. ***Zoology in the Middle East***. (in press).
68. Corti M., Podofillini S., Cecere J.G., **Griggio M.**, Gianfranceschi L., Ducrest A.L., Roulin A., Saino N., Rubolini D. Sequence variation in MC1R and TYRP1 genes and their relationship with melanin-based plumage trait expression in lesser kestrel (*Falco naumanni*) males. ***Journal of Ornithology***. (in press).
69. Podofillini S., Cecere J.G., **Griggio M.**, Curcio A., De Capua E., Fulco E., Pirrello S., Saino N., Serra L., Visceglia M., Rubolini D. Home, dirty

- home: effect of old nest material on nest-site selection and breeding performance in a cavity-nesting raptor. **Current Zoology**. (in press).
- 70.** Fracasso G., Tuliozi B., **Griggio M***. Can house sparrows recognise familiar or kin-related individuals by scent? **Current Zoology**. (in press).
- 71.** Tuliozi B., Fracasso G., Hoi H., **Griggio M***. House sparrows' (*Passer domesticus*) behaviour in a novel environment is modulated by social context and familiarity in a sex-specific manner. **Frontiers in Zoology**. (in press).
- 72.** Cantarero A., Pilastro A., **Griggio M**. Nestling sex ratio is associated with both male and female attractiveness in rock sparrows. **Journal of Avian Biology**. (in press).