

11TH INTERNATIONAL PENGUIN CONGRESS
SCIENTIFIC PROGRAM
Version 2 (1st September 2023)



Sunday 3rd September 2023

Pre-congress workshops Universidad Andrés Bello. Quillota 980, Viña del Mar	
10:30-12:30	Workshops 2 and 4
12:30-13:30	Lunch
13:30-15:30	Workshops 1, 2, 4, and 5
15:30-16:00	Coffee break
16:00-18:30	Workshops 1 and 5

Workshop 1

*Abundance estimation in *Spheniscus penguins*: challenges and opportunities.*

Coordinators: Andrea Raya Rey and Ulises Balza

Workshop 2

Avian influenza in penguins.

Coordinator: Meagan Dewar

Workshop 4

Microplastics and Penguins.

Coordinator: Brian Walker

Workshop 5

Use of pit-tags in penguins.

Coordinator: Katta Ludynia

Registration Hotel Bosque de Reñaca. Dublé Almeyda N°80, Reñaca, Viña del Mar	
15:00-20:00	Registration desk open

Monday 4th September 2023

08:30-17:30	Registration desk open
09:00-09:45	Welcome and opening, homage presentations: Remembering Daniel González (Chile) Andrés Barbosa (Spain) and Kerry-Jane Wilson (New Zealand), presentation "Camilo Fund".
09:45-10:30	Keynote 1: A decade of genetics studies contributing to penguin knowledge and conservation. Juliana Vianna
10:30-11:00	Morning coffee break
11:00-12:30	Oral presentations 1: Genetics 1. At the zoo, King penguins live longer, but age faster: methylation patterns reveal the cost of a sedentary life for an active bird. Cristofari et al. 2. Genetic analysis of HPAIV H5N1 clade 2.3.4.4b is Humboldt penguins, Chile 2023. Ariyama et al. 3. Genomes of banded penguins suggest islands of differentiation during ecological speciation. León et al. 4. Major Histocompatibility Complex (MHC) and mate choice in the Magellanic penguin, <i>Spheniscus magellanicus</i> . Dantas et al. 5. Species delimitation beyond phylogenomics: integrative approaches reveal gentoo penguin speciation. Noll et al. 6. Uncovering population structure in the endangered Northern rockhopper penguin (<i>Eudyptes moseleyi</i>) across islands in the southern Indian and Atlantic Oceans. Ritchie-Parker et al.
12:30-14:00	Lunch
14:00-15:30	Oral presentations 2: Microbiology and diseases 7. Effects of ectoparasites on the foraging behaviour of an Antarctic penguin. Morandini et al. 8. Finding the causative agents of infectious diseases affecting hoiho (yellow-eyed penguins) in New Zealand. Wierenga et al. 9. Lab-In-A-Suitcase: Rapid, field-based portable device for wildlife disease surveillance in the field. Dewar et al. 10. Population health evaluation and monitoring of Humboldt penguins (<i>Spheniscus humboldti</i>) at Punta San Juan, Peru from 2007-2023. Adkesson et al. 11. The influence of biotic and abiotic factors on the bacterial microbiome of gentoo penguins (<i>Pygoscelis papua</i>) across the Scotia Arc. Kaczvinsky et al. 12. Unique composition and neutral process characterize the bacterial communities in multiple body sites of the Magellanic and king penguins. Ochoa et al.
15:30-16:00	Afternoon coffee break
16:00-17:00	Oral presentations 3: Physiology and toxicology 13. Temporal trends of Hg in emperor penguin eggs over a 10-year period. Bustamante et al. 14. Circumpolar assessment of mercury contamination: the Adélie penguin as bioindicator of Antarctic marine ecosystems. Cusset et al. 15. Faecal hormone analysis as a non-invasive tool for assessing stress in the Pōhatu Kororā (<i>Eudyptula minor</i>) colony, Aotearoa. Howell et al. 16. Paralytic shellfish poisoning of Magellanic penguins and other seabirds and marine mammals at Península Valdés, Argentina, in 2022. Vanstreels et al.
19:00-21:30	Official congress opening, cocktail at Palacio Vergara, Viña del Mar.

Monday 4th September 2023

"Meet the penguins", educative activity organized by Global Penguin Society (GPS) with schoolchildren from Viña del Mar.

10:30-12:30	Schoolchildren Group 1
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12:30-14:00	Lunch
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14:00-16:00	Schoolchildren Group 2
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Hotel meeting rooms

Vertientes: registration desk, information.

Conference: posters, "Meet the penguins".

Ballroom: oral presentations, announcements, early career workshops, "Penwine" evening.

Tuesday 5th September 2023

08:25-08:30	Announcements
08:30-08:45	Celebrating Rory Wilson (presentation by Flavio Quintana).
08:45-09:30	Keynote 2: From musing to marveling: Inroads into understanding penguins at sea. Rory Wilson
09:30-10:45	Oral presentations 4: Foraging ecology 17. Camera logger footage highlights the unique foraging behaviour of King penguins breeding in Bahía Inútil, Tierra del Fuego, Chile. Pütz and ChereI 18. Changing diets over time: knock-on effects of marine megafauna overexploitation on their competitor <i>Spheniscus magellanicus</i> in the South-Western Atlantic. Bas et al. 19. Chasing the fish with little penguins: spatial and temporal variability in relation to environmental conditions. Guillet et al. 20. Compensating for harsh conditions at sea: plasticity of king penguin foraging strategies facing an experimental increase in workload. Lemmonier et al. 21. DNA metabarcoding of faecal matter informs on African penguins' diet in South Africa. Connan et al.
10:45-11:15	Morning coffee break
11:15-12:30	Oral presentations 5: Foraging ecology 2 22. Does age matter? Foraging behavior and stress of known-age breeding Magellanic penguins <i>Spheniscus magellanicus</i> at Matillo Isl., Argentina. Harris et al. 23. Fishery-penguin conflict: more than just spatial overlap. Glencross et al. 24. Foraging behavior, personality, and nutritional condition of breeding chinstrap penguins from Deception Island, South Shetlands, Antarctica. Morandini et al. 25. Foraging strategies of Magellanic penguins from a central Patagonian colony during the incubation period. Blanco et al. 26. Inter-annual consistency in the phenology and trophic niche of the Southern Rockhopper penguins from Isla de los Estados, Tierra del Fuego, Argentina. Dodino et al.
12:30-14:00	Lunch
14:00-15:45	Oral presentations 6: Foraging ecology 3 27. Key foraging areas for Adélie penguins from a declining colony in the Western Antarctic Peninsula. Machado-Gaye et al. 28. Longitudinal, full-annual cycle study of Adélie penguin foraging behavior reveals within-individual changes with age. Lescroël et al. 29. Resources, risks and refugia: assessing the spatial overlap between yellow-eyed penguin foraging distribution, prey, commercial fisheries, and marine protected. Hickcox et al. 30. Seeing the sea through the eyes of Humboldt penguins - how do things look in the face of growing anthropogenic threats? Ellenberg et al. 31. Sex, but not size, is related to foraging success and efficiency in Magellanic penguins. Holt and Boersma 32. Stable isotope ecology of two declining sub-Antarctic penguins: the erect-crested penguin and the Eastern rockhopper penguin. White et al. 33. Videos indicate that Adélie penguins catch more prey under ice, does acceleration data tell a different story? Winqvist et al.
15:45-16:15	Afternoon coffee break
16:15-17:30	Poster session
17:30-18:45	IUCN SSC Penguin Specialist Group open session
19:45-21:45	Early career workshop 1: <i>Benefits of Teaching Backwards / Grant Writing</i> . Coordinator: Alex Thornton

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Wednesday 6th September 2023

08:30-10:30	Early career workshop 2: <i>The Future of Penguin Science & Careers Panel</i> . Coordinator: Alex Thornton
10:30-11:00	Morning coffee break
11:00-12:45	<p>Oral presentations 7: Management and conservation 1</p> <p>34. Climate and human impacts on global penguin hotspots: current assessments for conservation. Gimeno et al.</p> <p>35. Conservation success and failure: How human disturbance shaped the fate of penguins. Garcia-Borboroglu et al.</p> <p>36. Exploring threats: changes in a declining Humboldt penguin population and its association with fishing activity and environmental conditions inside the species' foraging range. Doig-Alba et al.</p> <p>37. Humboldt penguin status and conservation plan: A report on the 2019 PHVA, Lima, Peru. McGill et al.</p> <p>38. Insights on Galápagos penguins from a 50+ year study. Boersma et al.</p> <p>39. IUCN SSC Penguin Specialist Group – member feedback and way forward. Waller et al.</p> <p>40. Magellanic penguins as a keystone species in Patagonian coastal systems. Entringer Jr. et al.</p>
12:45-14:00	Lunch
14:00-15:45	<p>Oral presentations 8: Management and conservation 2</p> <p>41. "Safe Operating Space for Penguins (SOSPEN)" initiative: a global effort towards the IUCN-Penguin Specialist Group vision of "penguins in perpetuity". Zajková et al.</p> <p>42. The catalytic role of ESG investment in resolving the current fisheries – penguin impasse in South Africa. Waller et al.</p> <p>43. To count or not to count: comparing metrics of reproductive success in Adélie penguins. Elrod et al.</p> <p>44. Tracing seal predation back to the source colony of their penguin prey: a trace element and stable isotope analysis. Reinhold et al.</p> <p>45. Creating spaces for Humboldt penguin conservation in Ica, southern Peru. Ormeño et al.</p> <p>46. Waddling to success: Using little penguins as a model for business strategy. McKelson</p> <p>47. Conservation of Humboldt penguins in Chile: are we doing enough? Simeone</p>
15:45-16:15	Afternoon coffee break
16:15-17:30	Poster session
20:30-22:30	"Penwine" evening

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Ballroom: oral presentations, announcements, early career workshops, "Penwine" evening.

Thursday 7th September 2023

08:25-08:30	Announcements
08:30-09:15	Keynote 3: The Antarctic Penguin Biogeography Project and the Penguindex provide models for data curation and exploration with opportunities for expansion to all penguin species. Heather Lynch
09:15-10:30	Oral presentations 9: Migration and dispersal 48. Birds of a feather flock together? Winter dispersion of Southern rockhopper and Magellanic penguins. Barrionuevo et al. 49. Sex-specific migratory behavior in Magellanic penguins results in more risks for females. Rebstock and Boersma 50. Disparate dispersal behavior of fledgling Adélie penguins from two colonies on Ross Island. Ballard et al. 51. Going with the flow: Adélie Penguins adjust to sea-ice movement during winter migration. Jongsomjit et al. 52. Spatial assignment of winter migration of Magellanic penguin (<i>Spheniscus magellanicus</i>) using predator-based isotopic landscapes. Gonzalez et al.
10:30-11:00	Morning coffee break
11:00-12:30	Oral presentations 10: Monitoring 1 53. A Multi-UAV approach to surveying large penguin colonies. Schmidt et al. 54. Association between molt and breeding phenology helps explain the recent decline in breeding Humboldt penguins at Punta San Juan, Peru. Cárdenas-Alayza et al. 55. Cape Royds penguin colony trends revisited. Ainley et al. 56. Individual identification of Humboldt penguins using neural networks. Planas-Bielsa. 57. Divided home, divided fate: The mystery behind divergent populations trends of Erect-crested penguins on subantarctic islands. Mattern et al. 58. Update on the avian influenza panzootic and its risk to penguins. Dewar
12:30-14:00	Lunch
14:00-15:30	Oral presentations 11: Monitoring 2 59. First estimates of male and female survival for the rare and endangered Galápagos penguin. Cappello et al. 60. How a rover should approach penguins to get scientific data without disturbance. Le Maho et al. 61. Penguins and ARGOS satellites telemetry: A long story of migration monitoring. Baudel 62. Prey-mediated environmental effects on little penguins: using sailing drone to monitor the marine ecosystem. Saraux et al. 63. Re-establishing an African Penguin colony at the De Hoop Nature Reserve, South Africa. Hagen et al. 64. The status and trends of Macquarie Island penguins. McInnes et al.
15:30-16:00	Afternoon coffee break
16:00-17:15	Poster session
18:15-21:15	Early career workshop 3: <i>Communicating Complex Science to Any Audience</i> . Coordinator: Alex Thornton

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Conference: posters, "Meet the penguins".

Ballroom: oral presentations, announcements, early career workshops, "Penwine" evening.

Friday 8th September 2023

08:25-08:30	Announcements
08:30-09:15	Keynote 4: Protecting penguins and preserving oceans: Conservation efforts in Tierra del Fuego and Southern South America. Andrea Raya Rey
09:15-10:30	Oral presentations 12: Climate change 65. Alarming prediction: Climate change effects on sympatric penguins of <i>Pygoscelis</i> genus. Weinberger et al. 66. Marine heatwaves in Western Australia affect breeding, diet and population size but not body condition of a range-edge little penguin colony. Cannell et al. 67. Record phenological responses to climate change in three sympatric penguin species. Juarez et al. 68. Sea ice concentration decline in an important Adélie penguin molt area. Schmidt et al. 69. Surviving the Heat: increasing ocean temperature and shifting breeding patterns of little penguins by the 22nd Century. Chiaradia et al.
10:30-11:00	Morning coffee break
11:00-12:30	Oral presentations 13: Behavior, breeding, and life history 70. Adaptive phenotypic programming to social density in king penguins. Lemmonnier et al. 71. Initial asymmetry: The effect within Magellanic penguin (<i>Spheniscus magellanicus</i>) broods in a cross-fostering experiment. Marchisio et al. 72. Investigating the effects of early growth on little penguins' life-history traits. Wintz et al. 73. Patterns of skipped breeding and reproductive success in Magellanic penguins (<i>Spheniscus magellanicus</i>). Wagner and Boersma 74. The neglected penguin: Reviewing the breeding of the Erect-crested penguin, <i>Eudyptes sclateri</i> . Davis et al. 75. Unpacking the lifelong secrets of little penguins: Individual quality, energy allocation, and stochasticity in defining fitness. Joly et al.
12:30-14:00	Lunch
14:00-15:30	Awards Next congress announcements Final words
15:30-16:00	Afternoon coffee break
19:00-00:00	Dinner, dance

Saturday 9th September 2023

10:00-16:00	Field trip to Cachagua (Zapallar), observation of Humboldt penguins.
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Conference: posters, "Meet the penguins".

Ballroom: oral presentations, announcements, early career workshops, "Penwine" evening.

Poster presentations

Behaviour and breeding	<ol style="list-style-type: none"> 1. Antarctic weathervanes: penguin position in the nest sways with the wind. Palomino et al. 2. Circadian activity patterns of Magellanic penguins on land: the influence of light and temperature. Entringer Jr. et al. 3. Deducing breeding success of the African Penguin, <i>Spheniscus demersus</i>, from automated transponder reader data to reduce disturbance. Mnyekemfu et al. 4. Do Adélie penguins care about boundaries? Spatio-temporal consistency in the wintering behaviour of Antarctic sentinel species – implications for conservation. Zajková et al. 5. Does haematology reflect at-sea movements in Magellanic penguins during the chick-rearing stage? Vanstreels et al. 6. Examining the impact of food availability and nest structure on reproductive success of <i>Spheniscus humboldti</i> in Choros Island, Reserva Nacional Pinguinos de Humboldt. Seguel et al. 7. Fearless penguins, unfazed by <i>Felis catus</i>: Different behavioural and physiological stress responses of two populations of little penguins differing in levels of risk and disturbance. Schaefer and Colombelli-Négre. 8. Humboldt penguin behavioral responses reveals how to improve tourism guidelines in a marine protected area. Irigoin-Lovera et al. 9. King penguin (<i>Aptenodytes patagonicus</i>) sightings and breeding attempts at Martillo Island, Tierra del Fuego, Argentina. Scioscia et al. 10. King Penguin locomotion on land: Biomechanical modeling and video footage analysis. Ashlyn et al. 11. Magellanic penguin <i>Spheniscus magellanicus</i> chick with two cloacae and four legs. Harris et al. 12. Offspring sex, hatching order, and brood reduction: different strategies lead to different sex ratios? Barrionuevo et al. 13. Studying phenology and reproductive biology of southern rockhopper penguins using time-lapse cameras combined with individual marking. Millones et al.
Biogeography	<ol style="list-style-type: none"> 14. Bayesian additive regression trees (BART) applied to global-scale species distribution models (SDMs): present and future projections of penguin species. Fuster-Alonso et al. 15. Ecological niche modelling to elucidate the history and fate of penguins. Pertierra et al. 16. The geographic patterns of penguin's evolution. Santos and Oliveira
Captivity	<ol style="list-style-type: none"> 17. 15 years of <i>Spheniscus</i> rehabilitation in Chile. Hernandez et al. 18. Artificial incubation of African penguin eggs rescued from breeding colonies to bolster the wild population. Cadman et al. 19. Grapiprant as a treatment for early onset osteoarthritis in a Gentoo penguin (<i>Pygoscelis papua</i>). Grima and Clements-Ponting 20. Recovery attempt of the captive population by using artificial insemination technique of Southern rockhopper penguin (<i>Eudyptes chrysocome</i>). Ito et al. 21. Rehabilitation of Humboldt penguins (<i>Spheniscus humboldti</i>) after an oil spill in Lima – Peru. Delgado et al. 22. The survey of the prevalence of osteoarthritis in captive Humboldt penguins (<i>Spheniscus humboldti</i>). Shirakata
Climate change	<ol style="list-style-type: none"> 23. Adaptation capabilities to global warming in an endothermic marine predator, the king penguin: Consequences of body size on diving performance. Oberlin et al. 24. Penguins on the move: habitat availability and climate connectivity among present and future climate analogues. Bas et al. 25. The hotter, the worst: Little penguin population responses to increasing ocean temperatures in New Zealand. Ramírez et al.
Foraging ecology	<ol style="list-style-type: none"> 26. Are penguins “what they drink”? Relationships between eggshell carbonate and dietary water oxygen stable isotope values. Polito and Dawson 27. Developing refined foraging performance metrics that reflect energy expenditure in an endangered diving seabird, the African Penguin. Weideman et al. 28. Dietary plasticity of endangered Northern rockhopper penguins in the South Atlantic. Connan et al. 29. Effects of rivers on seabird foraging ecology. Morais et al. 30. The fish component of Adélie, gentoo and chinstrap penguin diets breeding on two Islands in the South Shetland Archipelago. Karnovsky et al. 31. Estimating the foraging times of African penguins using transponder and ground reader data. Bull et al.
Genetics	<ol style="list-style-type: none"> 32. Genetic characteristics of a captive population of little penguin (<i>Eudyptula minor</i>) in Japan. Okubo et al. 33. MHC-DRB gene diversity in species survival plan and native <i>Spheniscus demersus</i> penguins. Lawrance et al. 34. Neutral and adaptive evolution in the speciation continuum of the rockhopper penguins (<i>Eudyptes</i>). Pizarro et al. 35. Unraveling the secrets of sex: Exploring the role of sexual chromosomes in banded penguin speciation. León et al.

Management and conservation	<p>36. Developments in the management of hoiho in a changing and unpredictable environment. Webster et al.</p> <p>37. Empowering a conservation culture through the Global Penguin Society Education Program. Villabriga et al.</p> <p>38. High adult mortality at mainland African penguin (<i>Spheniscus demersus</i>) colonies and how the rehabilitation and release of penguins may be helping to bolster these colonies. Snyman and Ludynia</p> <p>39. Impacts of terrestrial and marine influences on little penguins, sentinels of coastal ecosystem health. Wells et al.</p> <p>40. Natural and anthropogenic impacts on Humboldt penguins (<i>Spheniscus humboldti</i>) on the northern coast of Lima, Perú. Cardeña et al.</p> <p>41. The activity report of Penguin Fund. Ohara et al.</p>
Microbiology and diseases	<p>42. A case report of intracoelomic hemorrhage due to ovarian torsion in a captive Humboldt penguin (<i>Spheniscus humboldti</i>). Shirakata and Kondo</p> <p>43. Adenovirus detection on <i>Aptenodytes patagonicus</i> at Reserva Natural Pingüino Rey, Bahía Inútil, Tierra del Fuego between 2019 and 2020. Lopez et al.</p> <p>44. Avian Pox Virus Outbreak on Magellanic Penguin (<i>Spheniscus magellanicus</i>) from Magdalena Island; Magellan Region, Chile. Godoy et al.</p> <p>45. Fungal contamination in the environment of penguin communities in the French Southern Territories. Desoubeaux et al.</p> <p>46. Mosquitoes at penguin colonies in Argentinean Patagonia: previously underestimated or an emerging threat due to climate change? Vanstreels et al.</p> <p>47. Nasal mites in wild Magellanic penguins (<i>Spheniscus magellanicus</i>) in Chubut, Argentina. Vanstreels et al.</p> <p>48. Protocols to protect King penguin (<i>Aptenodytes patagonicus</i>) from an avian influenza AH5N1 outbreak. Williams et al.</p> <p>49. Stranding and mass mortality of penguins in continental Chile related to HPAIV-H5N1. Neira et al.</p> <p>50. Successful rehabilitation of African Penguin chicks after high pathogenicity avian influenza (H5N1) infection. Roberts et al.</p> <p>51. Surveillance of avian influenza virus in penguins from different areas of Chile (2019 - 2023). Muñoz et al.</p>
Monitoring	<p>52. Bird-borne video cameras record unseen feeding strategies of breeding Humboldt penguins. Gonzalez-DelCarpio et al.</p> <p>53. Bycatch and mortality of Humboldt penguin (<i>Spheniscus humboldti</i>) inshore Peruvian southern waters. Campos and Reyes</p> <p>54. Case Report: A unique king penguin (<i>Aptenodytes patagonicus</i>) colony in Tierra del Fuego, Chile. Arriagada and Fernandez</p> <p>55. Consistency among plot-based and plotless methods for Magellanic penguin density estimations in Tierra del Fuego. Balza et al.</p> <p>56. Exploring the success of a new penguin colony in Patagonia: Growth, occupation, and breeding patterns. Tisera et al.</p> <p>57. Heat-related death of gentoo penguin <i>Pygoscelis papua</i> chicks at Martillo Island, Argentina. Harris et al.</p> <p>58. Individual identification using black spots pattern on Humboldt penguins' (<i>Spheniscus humboldti</i>) chest. Ogata et al.</p> <p>59. King penguin (<i>Aptenodytes patagonicus</i>) sightings and breeding attempts at Martillo Island, Tierra del Fuego, Argentina. Scioscia et al.</p> <p>60. King penguin chick mortality related to predator presence in Tierra del Fuego, Chile. Fassler and Arriagada</p> <p>61. King penguin mortality related to heat wave events in 2019 and 2020 at Bahía Inútil, Tierra del Fuego. Arriagada</p> <p>62. Lessons from a Magellanic penguins long-term monitoring in Southern Patagonia: unified methodology, scale-dependent density and stable population trends. Rodriguez-Planes et al.</p> <p>63. Long-term monitoring of breeding and molting colonies of Humboldt penguins (<i>Spheniscus humboldti</i>) at the Humboldt Penguin National Reserve, Coquimbo, Chile. Vargas et al.</p> <p>64. Penguin Monitoring 2.0: How transponders and weighbridges revolutionised the way we study penguins. Chiaradia et al.</p> <p>65. Population parameters of a King penguin colony (<i>Aptenodytes patagonicus</i>) in Bahía Inútil, Tierra del Fuego, Chile. Cordero et al.</p> <p>66. Oceanographic and habitat traits affecting colony size in Humboldt penguins (<i>Spheniscus humboldti</i>) in Chile. Vial et al.</p> <p>67. Methodological constraints for estimating the Humboldt Penguin population in Chile. Arce et al.</p> <p>68. Pre-molting trips: Detrimental effect of GPS on body weight gain, returning date and blood isotopic values? Morgenthaler et al.</p> <p>69. Progress in understanding drivers of <i>Pygoscelis</i> penguin demography and population dynamics near Palmer Station, Antarctica. Cimino</p> <p>70. Return rate of Magellanic penguins, <i>Spheniscus magellanicus</i>, from Martillo Island, Beagle Channel, Argentina, using two different recaptures methodologies. Scioscia et al.</p> <p>71. Successful colonization of Humboldt penguins in breakwaters: The case of the PERU/LNG port terminal. Zavalaga et al.</p>

	<p>72. The Fall and rise of the little penguin on Phillip Island, Australia. Wasiak et al.</p> <p>73. The quest for long-term monitoring, research, and conservation of the little penguin/kororā. Hickcox et al.</p> <p>74. The winter distribution of Chinstrap penguins from Deception Island, Antarctica. Morandini et al.</p> <p>75. Unveiling the mystery underlying two consecutive catastrophic breeding seasons in a large king penguin colony. Brisson-Curadeau et al.</p> <p>76. Winter migration and isotopic niche of Adélie penguins from Western Antarctic Peninsula: species ecological insights to contribute to marine spatial planning and management. Zaldúa et al.</p>
Physiology and ecotoxicology	<p>77. A systematic review and meta-analysis of the pollutant exposure in penguins through the southern hemisphere. Rossell et al.</p> <p>78. Magellanic and gentoo penguin mortality linked to a toxic dinoflagellate bloom at Beagle Channel, Argentina, during austral summer 2022. Albizzi et al.</p> <p>79. Per- and polyfluoroalkyl substances (PFAS) in nesting material and blood of little penguins along a gradient of urbanisation in Tasmania. Wells et al.</p> <p>80. Variation in mitochondrial metabolism during fasting in breeding king penguins. Cossin-Sevrin et al.</p>
Pollution	<p>81. Examination of microplastics in captive penguin fecal samples. Walker et al.</p> <p>82. Examination of the presence of microplastics in wild Magellanic penguins from Punta Tombo, Argentina via fecal analysis. Walker et al.</p> <p>83. Microplastic ingestion of African penguins in South Africa. Londt et al.</p> <p>84. Oil spill risks for African penguins and other seabirds in Namibia and South Africa. Ludynia et al.</p> <p>85. Plastic ingestion by Magellanic penguins (<i>Spheniscus magellanicus</i>) throughout their annual cycle. Gallo et al.</p> <p>86. Pollution Alert: Microplastics found in kidney and liver of Magellanic Penguins (<i>Spheniscus magellanicus</i>). Deecken et al.</p>