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## EDUCATION

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**Ph.D. in Wildlife Biology**, 2005, Colorado State University, Fort Collins, Colorado  
Dissertation Title: “Small mammal responses to forest restoration and fuel reduction”

**M.S. in Natural Resource Sciences**, 1999, University of Nebraska, Lincoln, Nebraska  
Thesis Title: “Habitat selection and population response to commercial harvest of Nebraska ornate box turtles”

**B.S. in Fisheries and Wildlife (Honors)**, 1996, Michigan State University, East Lansing, Michigan

## POSITIONS HELD

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**Unit Leader and Associate Professor, 2017 to present**

USGS Washington Cooperative Fish and Wildlife Research Unit, School of Aquatic and Fishery Sciences & School of Environmental and Forest Sciences, University of Washington, Seattle, Washington

**Research Ecologist, 2007 to 2017**

Patuxent Wildlife Research Center, US Geological Survey, Laurel, Maryland

**Post-Doctoral Research Associate, 2005 to 2007**

Colorado State University, Fort Collins, Colorado and Patuxent Wildlife Research Center, Laurel, Maryland

## PUBLICATIONS

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### *Peer-Reviewed Articles*

Teitelbaum CS, **SJ Converse**, and T Mueller. 2017. Birds choose long-term partners years before breeding. *Animal Behaviour* 134:147-154.

Clement MJ, **SJ Converse**, and JA Royle. 2017. Accounting for imperfect detection of groups and individuals when estimating abundance. *Ecology and Evolution* DOI: 10.1002/ece3.3284.

**Converse SJ**, LL Bailey, BA Mosher, WC Funk, and E Muths. 2017. A model to inform management actions as a response to chytridiomycosis-associated decline. *EcoHealth* 14(Suppl 1): 144-155.

Gerber BD, **SJ Converse**, E Muths, HJ Crockett, BA Mosher, and LL Bailey. 2017. Identifying species conservation strategies to reduce disease-associated declines. *Conservation Letters* DOI: 10.1111/conl.12393.

- Brown ME, **SJ Converse**, JN Chandler, AL Crosier, W Lynch, DE Wildt, CL Keefer, and N Songsasen. 2016. Time within reproductive season, but not age or inbreeding coefficient, influences seminal and sperm quality in the whooping crane (*Grus americana*). *Reproduction, Fertility, and Development* 29:294-306.
- Brown ME, **SJ Converse**, JN Chandler, C Shafer, JL Brown, CL Keefer, and N Songsasen. 2016. Female gonadal hormones and reproductive behaviors as key determinants of successful reproductive output of breeding whooping cranes (*Grus americana*). *General and Comparative Endocrinology* 230:158-165.
- Canessa S, G Guillera-Arroita, J Lahoz-Monfort, DM Southwell, DP Armstrong, I Chadès, RC Lacy, and **SJ Converse**. 2016. Adaptive management for improving species conservation across the captive-wild spectrum. *Biological Conservation* 199:123-131.
- Canessa S, **SJ Converse**, M West, N Clemman, G Gillespie, M McFadden, AJ Silla, KM Parris, and MA McCarthy. 2016. Planning for ex-situ conservation in the face of uncertainty. *Conservation Biology* 30:599-609.
- Lyons JE, WL Kendall, JA Royle, **SJ Converse**, BA Andres, and JB Buchanan. 2016. Population size and stopover duration estimation using mark-resight data and Bayesian analysis of a superpopulation model. *Biometrics* 72:262-271.
- Lunn NJ, S Servanty, EV Regehr, **SJ Converse**, E Richardson, and I Stirling. 2016. Demography of an apex predator at the edge of its range – impacts of changing sea ice on polar bears in Hudson Bay. *Ecological Applications* 26:1302-1320.
- Teitelbaum CS, **SJ Converse**, WF Fagan, K Böhning-Gaese, RB O’Hara, AE Lacy, and T Mueller. 2016. Experience drives innovation of new migration patterns in response to global change. *Nature Communications* 7:12793.
- Canessa S, G Guillera-Arroita, J Lahoz-Monfort, DM Southwell, DP Armstrong, I Chadès, RC Lacy, and **SJ Converse**. 2015. When do we need further research? A primer on calculating the value of information for applied ecology. *Methods in Ecology and Evolution* 6:1219-1228.
- Klimstra RL, CE Moorman, **SJ Converse**, JA Royle, and CA Harper. 2015. Small mammal use of hayed native warm-season and non-native cool-season forage fields. *Wildlife Society Bulletin* 39:49-55.
- Brown ME, RC Doyle, JN Chandler, GH Olsen, JB French Jr., DE Wildt, **SJ Converse**, CL Keefer, and N Songsasen. 2014. Chromic and iron oxides as fecal markers to identify individual whooping cranes. *Proceedings of the North American Crane Workshop* 9:68-72.
- Krause A, D Golovin, and **SJ Converse**. 2014. Sequential decision making in computational sustainability via adaptive submodularity. *Artificial Intelligence Magazine* 35:8-18.
- Royle JA and **SJ Converse**. 2014. Hierarchical spatial capture-recapture models: modeling population density from replicated capture-recapture experiments. *Methods in Ecology and Evolution* 5:37-43.
- Servanty S, **SJ Converse**, and LL Bailey. 2014. Demography of a reintroduced population: moving

toward management models for an endangered species, the whooping crane. *Ecological Applications* 24:927-937.

- Converse SJ**, CT Moore, and DP Armstrong. 2013. Demographics of reintroduced populations: estimation, modeling, and decision analysis. *Journal of Wildlife Management* 77:1081-1093.
- Converse SJ**, CT Moore, MJ Folk, and MC Runge. 2013. A matter of tradeoffs: reintroduction as a multiple objective decision. *Journal of Wildlife Management* 77:1145-1156.
- Converse SJ**, JA Royle, PH Adler, RP Urbanek, and JA Barzen. 2013. A hierarchical nest survival model integrating incomplete temporally-varying covariates. *Ecology and Evolution* 3:4439-4447.
- Mueller T, RB O'Hara, **SJ Converse**, RP Urbanek, and WF Fagan. 2013. Social learning of migratory performance. *Science* 341:999-1002.
- Campbell EW III, AA Yackel Adams, **SJ Converse**, TH Fritts, and GH Rodda. 2012. Do predators control prey species abundance? An experimental test with brown treesnakes on Guam. *Ecology* 93:1194-1203.
- Smith DHV, A Moehrensclager, N Christensen, D Knapik, K Gibson, and **SJ Converse**. 2012. Archive eggs: a research and management tool for avian conservation breeding. *Wildlife Society Bulletin* 36:342-349.
- Converse SJ**, JA Royle, and RP Urbanek. 2012. Bayesian analysis of multi-state data with individual covariates for estimating genetic effects on demography. *Journal of Ornithology* 152:S561-S572.
- Moore CT, **SJ Converse**, MJ Folk, MC Runge, and SA Nesbitt. 2012. Evaluating release alternatives for a long-lived bird species under uncertainty about long-term demographic rates. *Journal of Ornithology* 152:S330-S353.
- Converse SJ**, KJ Shelley, S Morey, J Chan, A LaTier, C Scafidi, DT Crouse, and MC Runge. 2011. A decision-analytic approach to the optimal allocation of resources for endangered species consultation. *Biological Conservation* 144:319-329.
- Golovin D, A Krause, B Gardner, **SJ Converse**, and S Morey. 2011. Dynamic resource allocation in conservation planning. *Proceedings of the AAAI Conference on Artificial Intelligence* 25:1331-1336. [CONFERENCE BEST PAPER AWARD]
- Runge MC, **SJ Converse**, and JE Lyons. 2011. Which uncertainty? Using expert elicitation and expected value of information to design an adaptive program. *Biological Conservation* 144:1214-1223.
- Smith DHV, **SJ Converse**, KW Gibson, A Moehrensclager, WA Link, GH Olsen, and K Maguire. 2011. Decision analysis for conservation breeding: maximizing production for reintroduction of whooping cranes. *Journal of Wildlife Management* 75:501-508.
- Tyre AJ, JT Peterson, **SJ Converse**, T Bogich, D Miller, M Post van der Burg, C Thomas, R Thompson, J Wood, DC Brewer, and MC Runge. 2011. Adaptive management of bull trout populations in the Lemhi Basin. *Journal of Fish and Wildlife Management* 2:262-281.

- Bailey LL, **SJ Converse**, and WL Kendall. 2010. Bias, precision, and parameter redundancy in complex multi-state models with unobservable states. *Ecology* 91:1598-1604.
- Converse SJ**, JN Chandler, GH Olsen, and CC Shafer. 2010. Evaluating propagation method performance over time with Bayesian updating: an application to incubator testing at USGS Patuxent Wildlife Research Center. *Proceedings of the North American Crane Workshop* 11:110-117.
- Farris KL, **SJ Converse**, S Zack, WD Robinson, AJ Amacher, T Contreras, WL Gaines, ES Kilpatrick, JD Lanham, D Miles, G Rompré, KE Sieving, and JC Pierson. 2010. Short-term effects of fire and fire-surrogate treatments on avian nest survival: a national-scale analysis. *Open Environmental Sciences* 4:61-70.
- Martin J, AF O'Connell Jr, WL Kendall, MC Runge, TR Simons, AH Waldstein, SA Schulte, **SJ Converse**, GW Smith, T Pinion, M Rikard, and EF Zipkin. 2010. Optimal control of native predators. *Biological Conservation* 143:1751-1758.
- Converse SJ**, WL Kendall, PF Doherty Jr, and PG Ryan. 2009. Multistate models for estimation of survival and reproduction in grey-headed albatross. *The Auk* 126:77-88.
- Kendall WL, **SJ Converse**, PF Doherty Jr, MB Naughton, JE Hines, A Anders, and E Flint. 2009. Design considerations in demographic studies of animal populations: a case of colonial seabirds. *Ecological Applications* 19:55-68.
- Mazerolle MJ, LL Bailey, WL Kendall, JA Royle, **SJ Converse**, and JD Nichols. 2007. Making great leaps forward in herpetology: accounting for detectability in field studies. *Journal of Herpetology* 41:672-689.
- Converse SJ**, WM Block, and GC White. 2006. Small mammal population and habitat responses to forest thinning and prescribed fire. *Forest Ecology and Management* 228:263-273.
- Converse SJ**, GC White, and WM Block. 2006. Small mammal responses to thinning and wildfire in ponderosa pine-dominated forests of the southwestern United States. *Journal of Wildlife Management* 70:1711-1722.
- Converse SJ**, GC White, KL Farris, and S Zack. 2006. Small mammal responses to forest fuel reduction: national-scale results from the fire and fire surrogate project. *Ecological Applications* 16:1717-1729.
- Iverson JB, **SJ Converse**, GR Smith, and JM Valiulis. 2006. Long-term trends in the demography of the Allen Cays rock iguana (*Cyclura cyclura inornata*): human disturbance and density-dependent effects. *Biological Conservation* 132:300-310.
- Monroe ME and **SJ Converse**. 2006. The effects of early season and late season prescribed fires on small mammals in a Sierra Nevada mixed conifer forest. *Forest Ecology and Management* 236:229-240.
- Converse SJ**, JB Iverson, and JA Savidge. 2005. Demographics of an ornate box turtle population experiencing minimal human-induced disturbances. *Ecological Applications* 15:2171-2179.
- Converse SJ** and JA Savidge. 2003. Ambient temperature, activity, and microhabitat use by ornate box turtles (*Terrapene ornata ornata*). *Journal of Herpetology* 37:665-670.

**Converse SJ**, JB Iverson, and JA Savidge. 2002. Activity, reproduction and overwintering behavior of ornate box turtles (*Terrapene ornata ornata*) in the Nebraska Sandhills. *American Midland Naturalist* 148:416-422.

### ***Book Chapters***

**Converse SJ**, JB French Jr, and JE Austin. *Accepted*. Future of Whooping Crane conservation and science. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

**Converse SJ**, S Servanty, CT Moore, and MC Runge. *Accepted*. Population dynamics of reintroduced Whooping Cranes. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

**Converse SJ**, BN Strobel, and JA Barzen. *Accepted*. Reproductive failure in the eastern migratory population: the interaction of research and management. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

French JB Jr, **SJ Converse**, and JE Austin. *Accepted*. Whooping cranes past and present. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

Mueller T, CS Teitelbaum, WF Fagan, and **SJ Converse**. *Accepted*. Movement ecology of reintroduced migratory whooping cranes. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

Royle JA and **SJ Converse**. *Accepted*. Estimating abundance from capture-recapture data. Pages xxx-xxx in D Murray and B Sandercock, editors. *Population ecology in practice: underused, misused, and abused methods*. *To be published by Blackwell Publishing*.

Songsasen N, **SJ Converse**, and ME Brown. *Accepted*. Reproduction and reproductive technologies relevant to management of whooping cranes *ex situ*. Pages xxx-xxx in JB French Jr, SJ Converse, and JE Austin, editors. *Whooping Cranes: biology and conservation*. *To be published by Academic Press*.

Garrard GE, L Rumpff, MC Runge, and **SJ Converse**. 2017. Rapid prototyping for decision structuring: an efficient approach to conservation decision analysis. Pages 46-64 in N Bunnefeld, E Nicholson, and EJ Milner-Gulland, editors. *Decision-making in conservation and natural resource management: models for interdisciplinary approaches*. Cambridge University Press, Cambridge, United Kingdom.

**Converse SJ** and DP Armstrong. 2016. Demographic modeling for reintroduction decision-making. Pages 123-146 in DS Jachowski, JJ Millsbaugh, PL Angermeier, and R Slotow, editors. *Reintroduction of fish and wildlife populations*. University of California Press, Oakland, California, USA.

**Converse SJ** and JA Royle. 2012. Dealing with incomplete and variable detectability in multi-year,

multi-site monitoring of ecological populations. Pages 426-442 *in* RA Gitzen, JJ Millsbaugh, AB Cooper and DS Licht, editors. Design and analysis of long-term ecological monitoring studies. Cambridge University Press, Cambridge, United Kingdom.

**Converse SJ**, WL Kendall, PF Doherty Jr, MB Naughton, and JE Hines. 2009. A traditional and a less-invasive robust design: choices in optimizing effort allocation for seabird population studies. Pages 727-744 *in* DL Thomson, EG Cooch and MC Conroy, editors. Modeling demographic processes in marked populations. Springer Science+Business Media, New York, New York, USA.

**Converse SJ**, BG Dickson, GC White, and WM Block. 2004. Estimating small mammal abundance on fuels treatment units in southwestern ponderosa pine forests. Pages 113-120 *in* C van Riper III and KL Cole, editors. The Colorado Plateau: cultural, biological, and physical research. University of Arizona Press, Tucson, Arizona, USA.

### ***Books***

Runge MC, **SJ Converse**, JE Lyons, and DR Smith, editors. *In Prep*. Case studies in decision analysis for natural resource management. *To be published* by Johns Hopkins University Press.

French JB Jr, **SJ Converse**, and JE Austin, editors. 2018. Whooping Cranes: biology and conservation. Academic Press: *in press*.

### ***Peer-Reviewed Government Publications***

Cummings JW, **SJ Converse**, CT Moore, DR Smith, CT Nichols, NL Allan, and CM O'Meilia. 2017. A projection of lesser prairie-chicken (*Tympanuchus pallidicinctus*) populations range-wide. USGS Open File Report 2017-1071.

Lunn NJ, EV Regehr, S Servanty, **SJ Converse**, E Richardson, and I Stirling. 2014. Demography and population assessment of polar bears in Western Hudson Bay, Canada. Environment Canada Research Report.

**Converse SJ**. 2011. Appendix C. Structured decision making for energy exploration and development decisions on the Arctic Outer Continental Shelf. Pages 243-249 *in* L Holland-Bartels and B Pierce, editors. An evaluation of the science needs to inform decisions on Outer Continental Shelf energy development in the Chukchi and Beaufort Seas, Alaska. US Geological Survey Circular 1370.

### ***Other Publications***

**Converse SJ**. 1999. Habitat selection and population response to commercial harvest of Nebraska ornate box turtles. MS Thesis. University of Nebraska, Lincoln, Nebraska.

**Converse SJ** and DS Baker. 2000. Geographic Distribution. *Lampropeltis triangulum multistrata*. Herpetological Review 31:186.

**Converse SJ**. 2005. Small mammal responses to forest restoration and fuel reduction. PhD Dissertation. Colorado State University, Fort Collins, Colorado.

**Converse SJ**. 2009. Book Review: Cranes: A Natural History of a Bird in Crisis, by Janice M. Hughes.

Wilson Journal of Ornithology 121:219-221.

Runge MC, JF Cochrane, **SJ Converse**, JA Szymanski, DR Smith, JE Lyons, MJ Eaton, A Matz, P Barrett, JD Nichols, MJ Parkin, K Motivans, and DC Brewer. 2009. Introduction to structured decision making, 5th edition. National Conservation Training Center, Shepherdstown, West Virginia.

Shelley K, D Crouse, J Chan, **SJ Converse**, A LaTier, S Morey, and C Scafidi. 2009. Using Section 7 as a Recovery Tool. USFWS Endangered Species Bulletin 34:54-55.

Runge MC, JF Cochrane, **SJ Converse**, JA Szymanski, DR Smith, JE Lyons, MJ Eaton, A Matz, P Barrett, JD Nichols, and MJ Parkin. 2011. An overview of structured decision making: a two-day course for managers of natural resources, Revised Edition. National Conservation Training Center, Shepherdstown, West Virginia.

Royle JA, **SJ Converse**, and WA Link. 2012. Data augmentation for hierarchical capture-recapture models. arXiv 1211.5706.

## PRESENTATIONS

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### *Invited Presentations – Scientific Meetings*

Cummings JW, **SJ Converse**, DR Smith, S Morey, and MC Runge. 2017. We have been talking past each other: an analysis of decision framings for endangered species classification. The Wildlife Society 24<sup>th</sup> Annual Conference. 23-27 September; Albuquerque, New Mexico, USA.

Funk WC, **SJ Converse**, C Darst, BR Forrester, and SR Morey. Incorporating information on adaptive potential into conservation policy: integrating genomics into Endangered Species Act decisions. Symposium on Conservation of Adaptive Potential and Functional Diversity. 14-15 September; Durham University, Durham, United Kingdom.

Hostetter NJ, **SJ Converse**, and EV Regehr. 2017. Study design considerations for integrated population models: improving conservation and management of polar bears. Ecological Society of American Annual Meeting. 6-11 August; Portland, Oregon, USA.

**Converse SJ** and M Schaub. 2017. Making it count: advancing Integrated Population Modeling for decision-making. EURING Analytical Meeting and Workshop. 2-7 July; Barcelona, Spain.

**Converse SJ**. 2016. Applications of decision analysis in wildlife population reintroduction. The Wildlife Society 23<sup>rd</sup> Annual Conference. 15-19 October; Raleigh, North Carolina, USA.

Gerber BD, LL Bailey, **SJ Converse**, and E Muths. 2016. Conservation decision making via spatially-explicit meta-population dynamics of an amphibian-pathogen system. The Wildlife Society 23<sup>rd</sup> Annual Conference. 15-19 October; Raleigh, North Carolina, USA.

**Converse SJ**, C Horswill, RJ Cuthbert, S Opper, AL Bond, J Cooper, and PG Ryan. 2016. Integrated population modeling for species with complex life histories: application to Atlantic Yellow-nosed Albatross. North American Ornithological Conference. 16-20 August; Washington, DC, USA.

- Converse SJ.** 2016. Decision analysis and endangered species management: challenges and opportunities. Ecological Society of America Annual Meeting. 7-12 August; Fort Lauderdale, Florida, USA.
- Converse SJ, J Cooper, RJ Cuthbert, AL Bond, S Oppel, and PG Ryan.** 2015. Modelling survival, breeding, and recruitment from long-term data to parameterize a Bayesian population viability analysis for an endangered albatross. 2<sup>nd</sup> World Seabird Conference. 26-30 October; Cape Town, South Africa.
- Converse SJ and JA Royle.** 2015. Modeling density in stratified populations using hierarchical spatial capture-recapture. Ecological Society of America Annual Meeting. 9-14 August; Baltimore, Maryland, USA.
- Converse SJ, LL Bailey, B Mosher, E Muths, and WC Funk.** 2015. Decision analysis and expert judgment: implications for disease risk analysis in reintroductions. Zoological Society of London Symposium on Health and Disease in Translocated Wild Animals. 14-15 May; London, United Kingdom.
- Barzen JA, SJ Converse, PH Adler, E Gray, AE Lacy, E Szyszkoski, and A Gossens.** 2014. Influences on nest success in a reintroduced population of whooping cranes. The 13<sup>th</sup> North American Crane Workshop. 14-18 April; Lafayette, Louisiana, USA.
- Converse SJ, S Servanty, PJ Heglund, and MC Runge.** 2014. Predicting outcomes of reintroduction strategies in a decision-analytic setting. The 13<sup>th</sup> North American Crane Workshop. 14-18 April; Lafayette, Louisiana, USA.
- Mueller T, SJ Converse, RB O'Hara, RP Urbanek, and WF Fagan.** 2014. Social learning of migratory performance. The 13<sup>th</sup> North American Crane Workshop. 14-18 April; Lafayette, Louisiana, USA.
- Olsen GH and SJ Converse.** 2014. Parent-rearing and releasing whooping cranes in Wisconsin. The 13<sup>th</sup> North American Crane Workshop. 14-18 April; Lafayette, Louisiana, USA.
- Converse SJ and JA Royle.** 2012. Modeling population density based on replicated capture-recapture experiments. The Wildlife Society 19<sup>th</sup> Annual Conference. 13-18 October; Portland, Oregon, USA.
- Converse SJ.** 2011. Decision analysis for resource management via Landscape Conservation Cooperatives. The Wildlife Society 18<sup>th</sup> Annual Conference. 5-10 November; Waikoloa, Hawaii, USA.
- Converse SJ, CT Moore, MJ Folk, and MC Runge.** 2011. A matter of tradeoffs: reintroduction as a multi-criteria decision. The Wildlife Society 18<sup>th</sup> Annual Conference. 5-10 November; Waikoloa, Hawaii, USA.
- Servanty S, SJ Converse, and LL Bailey.** 2011. Population modeling for a migratory whooping crane reintroduction effort: can we hope for success? The Wildlife Society 18<sup>th</sup> Annual Conference. 5-10 November; Waikoloa, Hawaii, USA.
- Converse SJ, J Cooper, RJ Cuthbert, and PG Ryan.** 2010. Bayesian multi-state modeling of Atlantic yellow-nosed albatross demography. 1<sup>st</sup> World Seabird Conference, 7-11 September; Victoria, Canada.



## ***Selected Invited Seminars, Lectures, and Agency Briefings***

**Converse SJ.** Uncertainty and the analysis of reintroduction decisions. Invited seminar, University of Georgia, Athens, Georgia, USA; 2 March 2016.

**Converse SJ.** Managing threatened populations: the complementary roles of quantitative ecology and decision analysis. Invited seminar, Migratory Bird Center, Smithsonian National Zoo, Washington, DC, USA; 13 May 2016.

**Converse SJ.** Reintroduction of whooping cranes. Invited seminar, New Zealand Hibi Recovery Team Meeting, Raumati South, New Zealand; 11 April 2016.

**Converse SJ.** Uncertainty and the analysis of reintroduction decisions. Invited lecture, North Carolina State University, Raleigh, North Carolina, USA; 6 November 2014.

**Converse SJ.** A decision-analytic approach to the management of a whooping crane reintroduction. Invited lecture, North Carolina State University, Raleigh, North Carolina, USA; 5 November 2014.

Mueller T and **SJ Converse.** Understanding whooping cranes: from movement ecology to conservation biology. Invited seminar, National Conservation Training Center Conservation Science Webinar Series, online; 24 June 2014.

**Converse SJ.** Decision analysis for reintroductions: shaping a restoration program for endangered whooping cranes. Invited seminar, Plant Biology and Conservation Program, Northwestern University and Chicago Botanic Garden, Glencoe, Illinois, USA; 1 May 2014.

**Converse SJ.** Population ecology and management of reintroduced whooping cranes. Invited seminar, Department of Ecosystem Science and Management, Pennsylvania State University, State College, Pennsylvania, USA; 8 November 2013.

**Converse SJ.** Decision analysis in whooping crane management. Invited lecture, Department of Ecosystem Science and Management, Pennsylvania State University, State College, Pennsylvania, USA; 7 November 2013.

**Converse SJ** and DC Brewer. Using structured decision making to assist in development of US Fish and Wildlife Service feral cat policy. Briefing for Dan Ashe, US Fish and Wildlife Service Director, Department of Interior, Washington, DC, USA; 17 June 2013.

Runge MC, **SJ Converse**, and DC Brewer. Structured decision making in the US Fish and Wildlife Service and Department of Interior: capacity, effectiveness, influence, and future. Briefing for Dan Ashe, US Fish and Wildlife Service Director, Department of Interior, Washington, DC, USA; 19 November 2012.

**Converse SJ.** Decision analysis and the management of mammal populations. Invited lecture, Smithsonian Conservation Biology Institute, Front Royal, Virginia, USA; 28 April 2011.

**Converse SJ.** Decision-analytic applications in the management of endangered species. Invited seminar, Colorado State University, Fort Collins, Colorado, USA; 1 October 2010.

**Converse SJ.** Structured decision making for species conservation planning. Briefing for IUCN Conservation Breeding Specialist Group, Abruzzi National Park, Italy; 31 May 2010.

**Converse SJ.** Decision-analytic applications in management of a captive breeding and release program. Invited seminar, University of Melbourne, Melbourne, Australia; 4 May 2010.

**Converse SJ.** Decision-analytic applications in management of a captive breeding and release program. Invited seminar, University of Queensland, Brisbane, Australia; 28 April 2010.

**Converse SJ.** Climate change: how structured decision-making can contribute. Briefing for Dr. Nguyen Thien Nhan, Vietnamese Deputy Prime Minister for Education, US Geological Survey Patuxent Research Refuge, Laurel, Maryland, USA; 8 November 2009.

**Converse SJ.** Climate change adaptation: how structured decision-making can contribute. Invited seminar, Defenders of Wildlife, Washington, DC, USA; 18 December 2009.

**Converse SJ.** Whooping crane restoration: science and management in the face of uncertainty. Invited seminar, Migratory Bird Center, Smithsonian National Zoo, Washington, DC, USA; 13 February 2009.

**Converse SJ.** Conservation Science and the Endangered Species Act. Invited seminar, University of Maryland, College Park, Maryland, USA. 20 and 22 April 2009.

### ***Contributed Presentations – Scientific Meetings*** [Presenter underlined if not first author]

Clement MJ, **SJ Converse**, and JA Royle. 2017. Accounting for imperfect detection of groups and individuals when estimating abundance. Biennial Conference of Science and Management on the Colorado Plateau and Southwest Region. 11-14 September; Flagstaff, Arizona, USA.

Gerber BD, **SJ Converse**, E Muths, HJ Crockett, BA Mosher, and LL Bailey. 2017. Determining optimal management strategies for amphibian populations challenged by disease. Annual Meeting of Utah and Colorado/Wyoming Chapters of the American Fisheries Society. 22-23 February; Grand Junction, Colorado, USA.

Armstrong DP, J Ewen, S Canessa, **SJ Converse**, J Copsey, and A Moehrensclager. 2016. Improving decision-making in reintroduction programmes. Australasian Wildlife Management Society Annual Conference, 29 November – 1 December 2016; Auckland, New Zealand.

**Converse SJ**, C Horswill, RJ Cuthbert, S Oppel, AL Bond, J Cooper, and PG Ryan. 2016. Integrated population modeling of Atlantic Yellow-nosed Albatross using long-term data. 6<sup>th</sup> International Albatross and Petrel Conference. 19-23 September; Barcelona, Spain.

Teitelbaum C, **SJ Converse**, RB O'Hara, K Böhning-Gaese, AE Lacy, and T Mueller. 2015. Individual and social learning of migration patterns in whooping cranes. Ecological Society of America Annual Meeting. 9-14 August; Baltimore, Maryland, USA.

Canessa S, JJ Lahoz-Monfort, G Guillera-Arroita, **SJ Converse**, RC Lacy, P Miller, DP Armstrong, and I Chades. 2014. Adaptive management for ex-situ conservation. Annual Meeting of the Ecological Society of Australia, 28 September-3 October; Alice Springs, Australia.

- Canessa S, **SJ Converse**, and MA McCarthy. 2014. Uncertainty and linked decisions in ex-situ conservation planning. Ecological Society of America Annual Meeting, 10-15 August; Sacramento, California, USA.
- Brown ME, **SJ Converse**, CL Keefer, JL Brown, JN Chandler, and N Songsasen. 2013. Reproductive hormones and behaviors are indicative of reproductive performance in female whooping crane (*Grus americana*). International Society of Wildlife Endocrinology Conference. 14-16 October; Chicago, Illinois, USA.
- Canessa S, MA McCarthy, **SJ Converse**, M West, and M Bode. 2013. Decision-making for ex-situ conservation of Australian frogs. 11<sup>th</sup> INTECOL. 18-23 August; London, United Kingdom.
- Converse SJ**, MC Runge, MA Haynes, and DC Brewer. 2013. Decision analysis for conservation practitioners: concepts, applications, and capacity building. International Congress for Conservation Biology. 21-25 July; Baltimore, Maryland, USA.
- Converse SJ**, JA Royle, PH Adler, RP Urbanek, and JA Barzen. 2013. A hierarchical nest survival model integrating incomplete temporally-varying covariates. EURING Analytical Meeting and Workshop. 28 April-4 May; Athens, Georgia, USA.
- Servanty S, **SJ Converse**, and LL Bailey. 2013. Demography of a reintroduced population: moving toward management models for an endangered species, the whooping crane (*Grus americana*). EURING Analytical Meeting and Workshop. 28 April-4 May; Athens, Georgia, USA.
- Bugonovic I, A Krause, and **SJ Converse**. 2012. A tool for decision support in dynamic conservation management. 3<sup>rd</sup> International Conference on Computational Sustainability. 4-6 July; Copenhagen, Denmark.
- Canessa S, **SJ Converse**, and MA McCarthy. 2012. Can life history traits predict captive performance of endangered amphibians? A meta-analysis to inform decision making in ex-situ conservation programs. World Congress of Herpetology. 8-14 August; Vancouver, Canada.
- Brown ME, A Crosier, W Lynch, **SJ Converse**, JN Chandler, GH Olsen, JB French Jr, DE Wildt, and N Songsasen. 2011. Seminal quality in whooping crane (*Grus americana*) is affected by stage of breeding season, but not by age of individual. International Embryo Transfer Society Conference, 8-12 January; Orlando, Florida, USA.
- Brown ME, R Doyle, JN Chandler, GH Olsen, JB French Jr, DE Wildt, **SJ Converse**, C Keefer, and N Songsasen. 2011. Chromic oxide as a marker for an individual's fecal samples in the whooping crane. The 12<sup>th</sup> North American Crane Workshop. 13-16 March; Grand Island, Nebraska, USA.
- Olsen GH, **SJ Converse**, and JN Chandler. 2011. Protocol and results from the first season of captive rearing whooping cranes for a non-migratory release in Louisiana. The 12<sup>th</sup> North American Crane Workshop, 13-16 March; Grand Island, Nebraska, USA.
- Olsen GH, L Matthews, and **SJ Converse**. 2011. Comparison of behaviors of crane chicks that were parent-reared and reared by costumed humans. The 12<sup>th</sup> North American Crane Workshop, 13-16 March; Grand Island, Nebraska, USA.
- Converse SJ**, CP McGowan, MH Reynolds, BJ Mattsson, and JD Nichols. 2010. Structured decision-

making, adaptive management, and climate change adaptation. US Geological Survey Climate Change Conference. 9-11 March; Denver, Colorado, USA.

Mattsson BJ, MH Reynolds, CP McGowan, **SJ Converse**, J Hatfield, A McClung, L Mehrhoff, J Walters, and K Uyehara. 2010. Trading off short term and long term risk: minimizing the threat of Laysan Duck extinction from catastrophes and sea-level rise. Adaptive Management Conference Series. 9-12 March; Gainesville, Florida, USA.

Smith DHV, **SJ Converse**, K Gibson, A Moehrensclager, W Link, K Maguire, and GH Olsen. 2010. Reducing whooping crane hatching failure: optimal decision making in a conservation breeding program. The Wildlife Society 17<sup>th</sup> Annual Conference. 2-6 October; Snowbird, Utah, USA.

**Converse SJ**, JA Royle, and RP Urbanek. 2009. Bayesian analysis of multi-state data with individual covariates for estimating genetic effects on demography. EURING Technical Meeting. 14-20 September; Pescara, Italy.

Moore CT and **SJ Converse**. 2009. Setting objectives for decision-making: establishing a nonmigratory flock of whooping cranes in Florida through captive releases. Adaptive Management Conference Series. 11-13 March; Athens, Georgia, USA.

Moore CT, **SJ Converse**, MJ Folk, MC Runge, and SA Nesbitt. 2009. Evaluating release alternatives for a long-lived bird species under uncertainty about long-term demographic rates. EURING Technical Meeting. 14-20 September; Pescara, Italy.

Runge MC, **SJ Converse**, and JE Lyons. 2009. Which uncertainty? Using expert elicitation and expected value of information to design an adaptive program. 10<sup>th</sup> INTECOL. 16-21 August; Brisbane, Australia.

**Converse SJ** and RP Urbanek. 2008. Demography of whooping cranes in the eastern migratory population. The 11<sup>th</sup> North American Crane Workshop. 23-27 September; The Dells, Wisconsin, USA.

**Converse SJ**, WL Kendall, PF Doherty Jr, M Naughton, and JE Hines. 2007. A traditional and a less-invasive robust design: choices in optimizing effort allocation for seabird studies. EURING Technical Meeting. 14-21 January; Dunedin, New Zealand.

**Converse SJ**, GC White, KL Farris, and S Zack. 2006. Small mammal responses to forest fuel reduction: national-scale results from the fire and fire surrogate project. The 3<sup>rd</sup> International Fire Ecology and Management Congress. 13-17 November; San Diego, California, USA.

Farris KL, **SJ Converse**, S Zack, A Amacher, W Gaines, K Greenberg, D Lanham, D Miles, D Robinson, K Sieving, and J Woolf. 2006. The effects of fire and fire surrogate treatments on avian nest survival: a national perspective. The 3<sup>rd</sup> International Fire Ecology and Management Congress. 13-17 November; San Diego, California, USA.

**Converse SJ**, WM Block, and GC White. 2005. Small mammal population responses to forest fuel reduction treatments at the Southwest Plateau Fire and Fire Surrogate Project. The 8<sup>th</sup> Biennial Conference of Research on the Colorado Plateau. 7-10 November; Flagstaff, Arizona, USA.

**Converse SJ**, MA Larson, and MC Runge. 2005. Evaluation of a robust design mark-recapture method

for monitoring Florida Manatees (*Trichechus manatus latirostris*) using warm-water outfalls. The 16<sup>th</sup> Biennial Conference on the Biology of Marine Mammals. 12-16 December; San Diego, California, USA.

Larson MA, **SJ Converse**, MC Runge, CA Beck, CA Langtimm, AL Teague, S Barton, R Nostrom, JE Reynolds III, and KA Higgs. 2005. Evaluation of photo-identification and capture–recapture methods for monitoring manatee use of warm-water sites in Florida. The Wildlife Society 12<sup>th</sup> Annual Conference. 25-29 September; Madison, Wisconsin, USA.

**Converse SJ**, GC White, and WM Block. 2004. Estimating small mammal population responses to forest fuel reduction treatments. The Wildlife Society 11<sup>th</sup> Annual Conference. 18-22 September; Calgary, Canada.

**Converse SJ**, GC White, and WM Block. 2003. Estimating multi-species responses to forest fuel reduction treatments. The 3<sup>rd</sup> International Wildlife Management Congress. 1-5 December; Christchurch, New Zealand.

**Converse SJ** and GC White. 2002. Information theory and mark-recapture approaches for studying small mammal response to fire and fire surrogate treatments: the utility of Program MARK. Fire Conference: Managing Fire and Fuels in the Remaining Wildlands and Open Spaces of the Southwestern United States, 2-5 December; San Diego, California, USA.

**Converse SJ**, BG Dickson, GC White, and WM Block. 2001. Use of mark-recapture techniques to analyze small mammal richness and population response to fire and fire surrogate treatments. The 6<sup>th</sup> Biennial Conference of Research on the Colorado Plateau, 6-8 December; Flagstaff, Arizona, USA.

**Converse SJ**, JA Savidge, JB Iverson, and KE Church. 1998. Habitat selection of ornate box turtles in the Nebraska Sandhills. The 60<sup>th</sup> Midwest Fish and Wildlife Conference, 6-9 December; Cincinnati, Ohio, USA.

### ***Contributed Posters – Scientific Meetings***

Brown ME, **SJ Converse**, JN Chandler, C Keefer, and N Songsasen. 2014. Can hormone metabolites predict the timing of reproductive behaviors in the captive whooping crane? The 13<sup>th</sup> North American Crane Workshop. Lafayette, Louisiana; 14-18 April.

Martin J, M Eaton, **SJ Converse**, C McGowan, B Gardner, JD Nichols, WL Kendall, MC Runge, AF O’Connell, D Breininger, F Johnson, S Morey, TR Simons, SA Schulte, D Smith, and AH Waldstein. 2009. Optimal control and adaptive management: applications to natural resources. 1<sup>st</sup> International Conference on Computational Sustainability. Ithaca, New York; 8-11 June.

**Converse SJ**, JN Chandler, GH Olsen, and CC Shafer. 2008. Evaluating propagation method performance over time with Bayesian updating: an application to incubator testing. The 11<sup>th</sup> North American Crane Workshop. The Dells, Wisconsin; 23-27 September.

Dickson LL, **SJ Converse**, BG Dickson, WM Block, and TD Sisk. 2002. Process variance of bird densities on fire/fire surrogate treatment units in northern Arizona. Fire Conference: Managing Fire and Fuels in the Remaining Wildlands and Open Spaces of the Southwestern United States. San Diego, California; 2-5 December.

Thode AE, ME Hunter, and **SJ Converse**. 2002. Establishing a forum to support fire ecology research and education: the Student Association for Fire Ecology (SAFE). Fire Conference: Managing Fire and Fuels in the Remaining Wildlands and Open Spaces of the Southwestern United States. San Diego, California; 2-5 December.

## **RESEARCH WORKING GROUPS**

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Structured decision analysis for island scrub-jay conservation management, 2014-2015; Organizers: S. Morrison (The Nature Conservancy) and E. McDonald-Madden (University of Queensland).

Adaptive management for reintroductions, 2014-2015; Organizers: M. McCarthy and S. Canessa (University of Melbourne).

Decision-making for ex-situ conservation of frogs, Australian Centre for Ecological Analysis and Synthesis, 2013-2014; Organizers: M. McCarthy and S. Canessa (University of Melbourne).

Albatross demography working group, 2006-2007; Organizers: C. Hunter and H. Caswell (Woods Hole Oceanographic Institution).

## **GRANTS RECEIVED**

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Research Grant (PI). US Fish and Wildlife Service, Population modeling for the lesser prairie-chicken, 2016. \$37,296

Research Grant (PI). US Fish and Wildlife Service, Model Development for Chukchi Sea Polar Bears, 2016. \$61,371

Research Grant (PI). US Fish and Wildlife Service, Improved Design and Analysis of Polar Bear Population Studies, 2016. \$20,000

Research Grant (PI). US Geological Survey Science Support Program, Improved Design and Analysis of Polar Bear Population Studies, 2016. \$173,467

Research Grant (PI). US Fish and Wildlife Service, Landscape level population modeling as a decision support tool for the lesser prairie-chicken, 2015. \$200,000

Technical Assistance Grant (co-PI). US Geological Survey, Structured decision making for determining status of sage grouse under the Endangered Species Act, 2014. \$309,175

Technical Assistance Grant (co-PI). US Geological Survey Amphibian and Reptile Monitoring Initiative, Structured decision making and boreal toad conservation planning, 2014. \$43,455

Research Grant (PI). US Geological Survey Science Support Program, Investigating the influence of captive environment on whooping crane reproduction, 2012. \$138,465

Research Grant (PI). US Fish and Wildlife Service, Demography of polar bears in Western Hudson Bay and design considerations for capture-recapture studies, 2011. \$65,000

Research Grant (PI). US Geological Survey Science Support Program, Modeling and decision support for management of the eastern migratory population of whooping cranes, 2011. \$98,036

Research Grant (PI). US Fish and Wildlife Service, Modeling and decision support for management of the eastern migratory population of whooping cranes, 2011. \$20,000

Technical Assistance Grant (PI). US Fish and Wildlife Service, Structured decision making curriculum support, 2011. \$44,006

Research Grant (co-PI). US Geological Survey Science Support Program, Increasing the effectiveness of structured decision making within the US Fish and Wildlife Service, 2010. \$173,000

Research Grant (PI). US Fish and Wildlife Service, Whooping crane reintroduction – evaluation and decision-making, 2009. \$57,239

Research Grant (PI). National Fish and Wildlife Foundation, Whooping crane reintroduction – evaluation and decision-making, 2008. \$107,180

Research Grant (PI), US Fish and Wildlife Service, Optimal reserve design in the south Puget Sound prairie ecosystem, 2008. \$53,140

Research Grant (PI), US Geological Survey Quick Response Program, Adaptive management of impoundments and whooping crane habitat at Necedah National Wildlife Refuge, 2008. \$15,040

## **RECENT HONORS AND AWARDS**

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US Fish and Wildlife Service Special Award, In Appreciation of Outstanding Contributions to the National Conservation Training Center's Decision Analysis Training Curriculum, 2016

Conference Best Paper Award, Proceedings of the AAAI Conference on Artificial Intelligence, 2011

Department of Interior STAR (Special Thanks for Achieving Results) Award, for work with Beaufort and Chukchi Seas outer continental shelf energy development science evaluation team, 2011

Department of Interior STAR (Special Thanks for Achieving Results) Award, for work with Whooping Crane Eastern Partnership, 2009

Department of Interior STAR (Special Thanks for Achieving Results) Award, for work with Washington Fish and Wildlife Office, 2009

Department of Interior STAR (Special Thanks for Achieving Results) Award, for work with Northeast Region Fisheries Program, 2008

## **TEACHING EXPERIENCE**

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### ***University Courses***

FW 663, Sampling and Analysis of Vertebrate Populations, Colorado State University, 2004 (TA)

FW 662, Wildlife Population Dynamics, Colorado State University, 2003 (TA)

FW 200, Wildlife Fundamentals, Colorado State University, 2001 (Interim Instructor)

NR 420, Principles of Ecosystem Management, Colorado State University, 2001 (TA)

FW 469, Conservation and Management of Large Mammals, Colorado State University, 2000 (TA)

FFW 311, Wildlife Ecology and Management, University of Nebraska, 1998 (TA)

FFW 211, Wildlife Biology and Conservation, University of Nebraska, 1997 and 1998 (TA)

### ***Training Workshops – Instructor and Developer***

Bayesian integrated population modeling using BUGS and JAGS

- Patuxent Wildlife Research Center, Laurel, Maryland, USA; 1-5 August 2016
- University of Cape Town, Cape Town, South Africa; 19-23 October 2015

Program MARK Workshop, multiple offerings beginning in 2002

An Overview of Structured Decision Making

- New Zealand Department of Conservation, Wellington, New Zealand; 16-17 April 2016
- National Conservation Training Center, Shepherdstown, West Virginia, USA; 23-24 May 2012
- International Congress for Conservation Biology, Auckland, New Zealand; 10-11 December 2011
- US Fish and Wildlife Service Headquarters, Arlington, Virginia, USA; 4-5 May 2011
- US Geological Survey Water Resources Office, Honolulu, Hawaii USA; 24-25 February 2011
- US Geological Survey Headquarters, Reston, Virginia, USA; 19-20 May 2009

Decision Analysis: Elicitation and Facilitation

- National Conservation Training Center, Shepherdstown, West Virginia, USA; 3-7 March 2014

Introduction to Structured Decision Making

- National Conservation Training Center, Shepherdstown, West Virginia, USA; 27-31 August 2012; 6-10 June 2011; 24-28 May 2010; 2-6 March 2009; 10-14 March 2008

### ***Decision-Analytic Workshops – Instructor and Facilitator***

Structured Decision Making and Rapid Prototyping

- National Conservation Training Center, Shepherdstown, West Virginia; 2-6 June 2014; 24-28 September 2012; 25-29 January 2010; 21-25 July 2008; 9-13 July 2007
- Sacramento State University, Sacramento, California, USA; 17-21 October 2011
- Hawaii Volcanoes National Park, Hawaii, USA; 28 February-4 March 2011

## **GRADUATE STUDENT AND POST-DOCTORAL ADVISING**

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## ***Completed Theses***

Canessa S. 2015. Decision analysis for threatened species management across the captive-wild spectrum. Ph.D. Dissertation, University of Melbourne, Melbourne, Australia (Co-supervisor).

Brown ME. 2013. Multidisciplinary approach to understand the poor reproduction in the whooping crane (*Grus americana*). M.S. Thesis, University of Maryland, College Park, Maryland, USA (Co-supervisor).

Brown ME. 2017. Biology and management of reproduction in captive cranes. Ph.D. Dissertation, University of Maryland, College Park, Maryland, USA (Co-supervisor).

## ***Current Students***

Hannah Sipe. Understanding common loon distribution and abundance in Washington. M.S. Student, University of Washington, Seattle, Washington, USA (Supervisor). Expected Completion: 2019.

## ***Post-Doctoral Associates***

Martina Kadin, Ph.D. Synchrony in seabird survival. 2017-present.

Nathan Hostetter, Ph.D. Improved design and analysis of polar bear population studies. 2016-present.

Jonathan Cummings, Ph.D. Decision science, structured decision making, and species status determination under the Endangered Species Act. 2014-2017.

Sabrina Servanty, Ph.D. Population viability assessment and evaluation metrics for the whooping crane Eastern Migratory Population. 2009-2013.

Beth Gardner, Ph.D. Optimal reserve design in the south Puget Sound prairie ecosystem. 2008.

## **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

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The Ecological Society of America, 2005 to present

Society for Conservation Biology, 1999 to present

The Wildlife Society, 1999 to present

Biometrics Working Group Chair-elect/Chair/Past-chair, elected term Sept. 2013-Sept. 2016

Biometrics Working Group Board Member, elected term Sept. 2006-2007 and Sept. 2009-2010

## **PROFESSIONAL SERVICE**

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### ***Journal Editorial Staff***

Associate Editor, Animal Conservation, 2016 to present

Associate Editor, Journal of Wildlife Management, 2011 to 2015

### ***Journal Reviewer***

African Journal of Marine Science, Amphibia-Reptilia, Animal Conservation, Auk, Biological Conservation, Biology Letters, Canadian Journal of Fisheries and Aquatic Sciences, Canadian Journal of Zoology, Condor, Conservation Biology, Conservation Letters, EcoHealth, Ecological Applications, Ecology, Forest Ecology and Management, Frontiers in Ecology and Evolution, Functional Ecology, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Field Ornithology, Journal of Herpetology, Journal of Ornithology, Journal of Wildlife Management, Methods in Ecology and Evolution, PLOS One, Proceedings of the North American Crane Workshop, Restoration Ecology, The Southwestern Naturalist, Western North American Naturalist, Wildlife Society Bulletin

### ***Science Steering***

Chair/Vice-Chair, Whooping Crane Eastern Partnership, Research and Science Team, 2012-2017