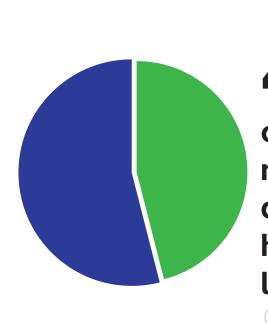
A census of 22 years of publishing in the Journal of Wildlife Management.

### The Problem

Though the percentage of women graduating with B.S. and M.S degrees in wildlife-related disiplines exceeds that of men, gender equity has yet to reach higher level government and academic positions:



47% of universities have never hired a woman at the department head or program lead level (Bishop et al. 2021)

Declining

representation of women with each successive level in government from GS-12 to GS-15



substantially more likely to have temporary parttime or non-tenure positions ( ein et al. 2016)

While the wildlife field is closing the gender gap, more data are needed to determine the representation of women in higher level positions.

Disparity in men:women first authors in scientific papers is a clear indicator of gender bias because it highlights women's representation in higher level positions. We see pervasive gender disparity in publishing in the natural sciences



What is the ratio of men:women first and co-authors in the past 2 decades?

Are there differences in the gender ratio across institutions, geographic regions, and study species taxa?

#### **Data Collection**

We conducted a literature review of all papers published in the Journal of Wildlife Management from 1999 to 2020.



We recorded the author names, affiliations (country and institution type), and study species. We determined the author's gender with Genderize.io. Use of Genderize.io means this study is limited to establishing gender based on a first name analysis with a confidence level set at  $\geq$  80%. Note that Genderize.io is not able to parse data on gender non-conforming and nonbinary authors.

# **Gender Equity in Wildlife Publishing**

### Analysis

- We calculated the ratio of men to women for first and co-authors for all years, then examined how this ratio has changed over time. - We summarized author affiliations by region, institution type, and taxa.

## Results

Men dominated authorship in 1999, with a men:women author ratio of 7.29 and 8.63 for first and co-authorships, respectively. The overall gender gap in authorship gradually narrowed until the mid-2010s. Since then, the men:women ratio has remained relatively constant at ~1.5 and ~3.0 for first and coauthorship, respectively (Figure 1).

#### **First Authors by Taxa** Amphibian 1999-2009 Mammal 1999-2009 69% 76% 2010-2020 2010-2020 29% 71% 40% 60% Bird Invertebrate 1999-2009 1999-2009 79% 57% 2010-2020 2010-2020 26% 74% **62% 38%** Reptile 1999-2009 73% 2010-2020 36% 64% **First Authors by Institution Type Academic** 1999-2009 74% 26% 2010-2020 Government 38% 62% 1999-2009 82% Other 2010-2020 1999-2009 27% 73% 89%

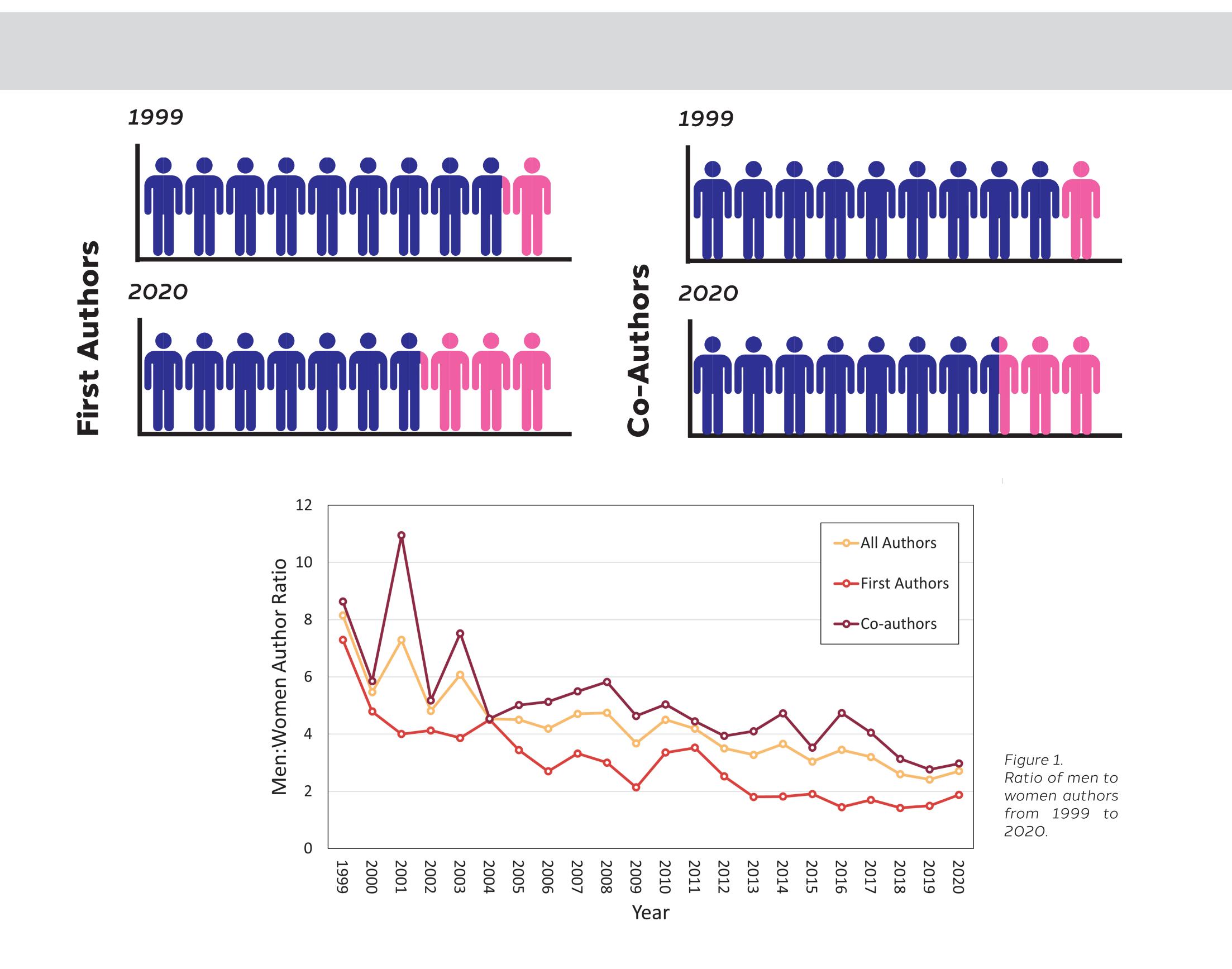
2010-2020

22%

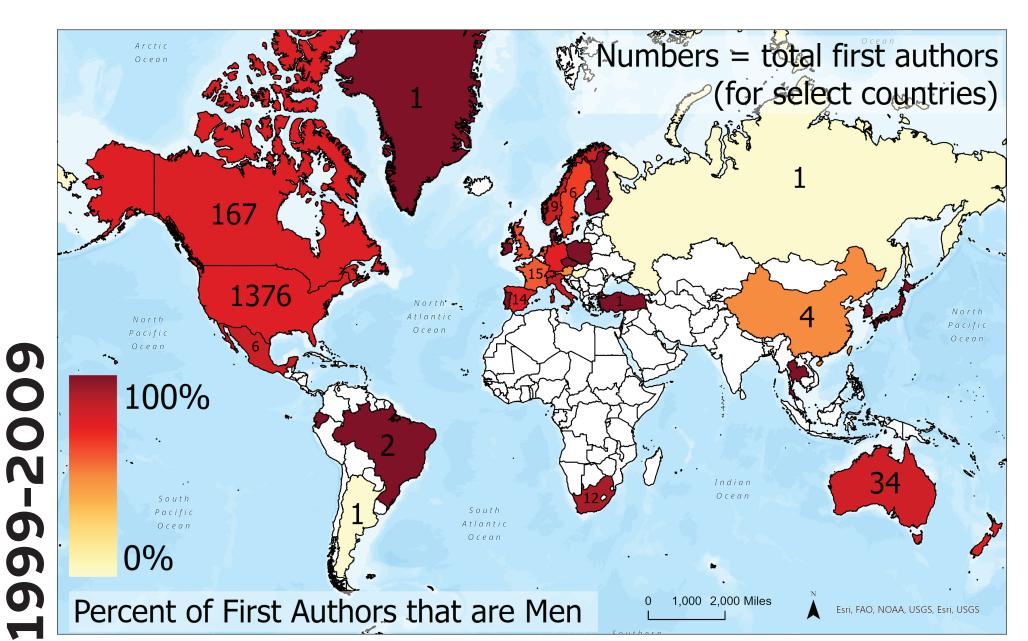
78%

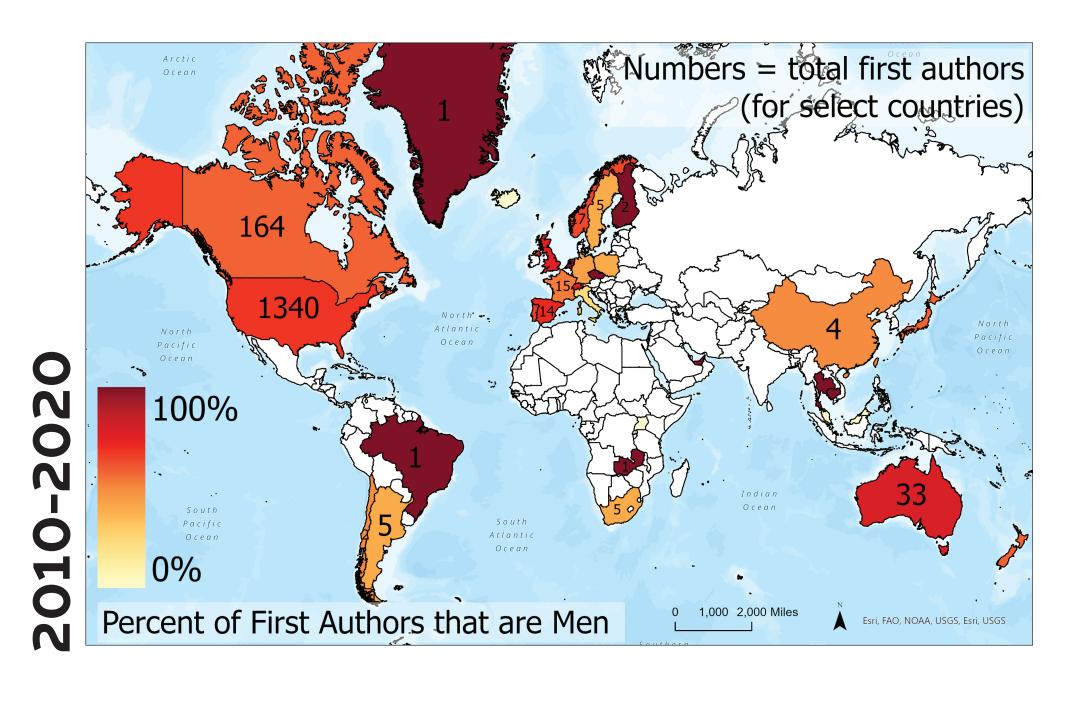
Authors: Rebeca Becdach<sup>(1)</sup>, Kellie Crouch<sup>(1)</sup>, Katherine Larson<sup>(1)</sup>, Anna Goldman<sup>(1)</sup>, Elizabeth Meisman<sup>(1)</sup>, Carol Chambers<sup>(2)</sup>, Mary DeJong<sup>(2)</sup>, Val Titus<sup>(3)</sup>, Catrin Edgeley<sup>(2)</sup>, Micaela Szykman Gunther<sup>(1)</sup>, Ho Yi Wan<sup>(1)</sup> <sup>(1)</sup> Cal Poly Humboldt <sup>(2)</sup> Northern Arizona University <sup>(3)</sup> Paul Smith's College

The increase in women authors since 1999 is encouraging, though the lack of additional progress in recent years raises concerns. The reason for this stagnation is unclear, and further research should be directed towards the barriers faced by women in the wildlife sciences.



#### **First Authors by Country**





#### Discussion