

# Felix Goodwin Walker

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## RESEARCH & PROJECTS

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### Syrinx — Avian Vocalisation Evolution Pipeline

May 2026

*Bioinformatics · Acoustic Phylogenetics · Computational Biology*

- Developed a computational pipeline for large-scale acoustic phylogenetic analysis of UK passerine vocalisations, integrating BirdNET segmentation, 36-dimensional feature extraction, HDBSCAN clustering, Mantel testing, and PGLS.

### biotech-tools — Computational Biology Toolkit

2025 – Present

*Python · Bioinformatics · Genomics*

- Modular suite of 20+ bioinformatics tools spanning conservation genomics, CRISPR analysis, ancient DNA processing, and genomic reconstruction modelling.
- Tools include a Genomic Resurrection Readiness Scorer, CRISPR Base Editor Window Visualiser, HGT Risk Assessor, and Ancient DNA Damage Classifier.

### CRISPR Gene Editing — Literature Review & Conceptual Study

2025 – Present

- Independent review of CRISPR mechanisms, therapeutic applications, and ethical considerations, drawing on primary literature and emerging clinical trial data.

### DNA Barcoding in Biodiversity Studies

2025 – Present

- Extraction, PCR amplification, and COI sequence analysis using BLAST and reference databases. Completed the full Rosalind bioinformatics problem set.

## PUBLICATIONS & MANUSCRIPTS

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Walker, F.G. (2026). *Syrinx*: a computational pipeline for large-scale analysis of avian vocalisation evolution. *Manuscript in preparation*.

## WRITING

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### The Biome — Founder & Editor

2026 – Present

- Founded and publish an independent biology publication featuring long-form scientific exploration and short-form pieces.

### A Seam of Gold — Book in Progress

2025 – Present

- Literary nonfiction on East Fife FC's 1938 Scottish Cup victory — the only occasion a non-top-flight club has won the trophy.

### An t-Uisge Beò — Gàidhlig Short Film

2026 – Present

- Writing, directing, and composing the original score for a Gaelic-language film entered to FilmG, Scotland's premier Gaelic film competition.

## EXPERIENCE

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### Founder & Professional Piper — Ceòlthor

2024 – Present

- Founded and operate an independent piping performance and tuition enterprise delivering professional engagements across Scotland, including at Stirling Castle, Burns Cottage (NTS), and The New Club, Edinburgh.
- Currently teaching students across Scotland and internationally.

### Piper — Royal Edinburgh Military Tattoo

2024 – Present

- Performs nightly before ~9,000 live audience members and global broadcast audiences at Scotland's premier military and cultural event.
- Nominated for the Pooley Sword in 2024 and 2025; selected for the 2026 Australia & New Zealand Tour.

### Lone Piper — Armistice Day Service, Scottish National War Memorial

November 2024

- Invited to perform as Lone Piper at the national Armistice Day Service at Edinburgh Castle.

### Co-Founder — Benchwork Agency

2024 – Present

- Automation and CRM systems agency delivering workflow infrastructure and client-management systems for UK trades businesses.

### Officer Cadet — British Army

June – August 2024

- Military training and leadership development; ceremonial performance duties.
- Performed with the Scottish National Infantry Yeomanry Pipes & Drums.

### Assistant Tutor — Pipe Band, James Gillespie's High School

Nov 2023 – Present

- Weekly instruction and mentorship for beginner pipers and drummers across public parades, concerts, and competitions.

## EDUCATION

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### University of Glasgow

BSc (Hons) Biochemistry

Commencing Sept 2026

### James Gillespie's High School, Edinburgh

Advanced Highers: Biology, Chemistry, History · Highers: 5 As, 1 B

2016 – 2022

### St Mary's Music School, Edinburgh

Specialist music education

2014 – 2016

## SKILLS

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**Programming & Bioinformatics:** Python, R, JavaScript, TypeScript, HTML; sequence analysis, ancient DNA damage modelling, de-extinction scoring; pipeline development for genomic dataset processing.

**Molecular & Laboratory:** Nucleic acid extraction, PCR amplification, gel analysis, spectrophotometric quantification.

**Scientific Communication:** Technical and long-form scientific writing, primary literature synthesis, independent publication editing.

**Languages:** English (native) · Scottish Gaelic / Gàidhlig (native)

## SELECTED CERTIFICATIONS

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NIH: Principles & Practice of Clinical Research

2025

ICH-GCP E6(R2) — The Global Health Network

2025

Human Subjects Protection — Advarra

2025

Introductory Bioinformatics — EMBL-EBI

2025

## ACHIEVEMENTS & INTERESTS

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- Competitive swimmer — Warrender Baths Club; Scottish National Short Course Championships Finalist (December 2024); BUSL Finalist (April 2024).
- Bagpipes (professional level) · Piano (ABRSM Grade 5).

## REFERENCES

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Available upon request.