

Contributing to Bijux Pollenomics

Owners, a runnable report workflow and the checks that protect evidence

Bijux Pollenomics

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Source-bound research briefing

Begin with one source-to-result responsibility

Source bytes → custody → normalized record → admission
→ calculation or frozen prediction → score → reader report

- Identify the owner of the boundary you are changing and its actual consumer.
- Bind physical site, ages, taxon denominator, geometry and permitted use separately.
- Preserve failed and refused rows alongside successful results.

A format or build check proves its declared contract. A new scientific claim also needs admissible data and qualified review.

Evidence: `reports/architecture/ownership.md`; `reports/science/source-cohorts.md`

Four distributions have distinct owners

Distribution	Responsibility
bijux-pollenomics	Host collection, source decisions, evidence and publication runtime.
pollenomics	Short-name compatibility interface to the host.
bijux-pollenomics-lra	Optional Landscape Reconstruction Algorithm engine: regional REVEALS and local LOVE.
bijux-pollenomics-dev	Repository checks, source-bound scientific producers and report exports.

The optional engine has its own GPL-2.0-or-later metadata; the host declares Apache-2.0. Installation and source-rights review are separate release gates.

Evidence: `reports/architecture/lra-distribution.md`

Use the locked repository environment for development

From the repository root, use the existing governed environment route:

```
UV_CACHE_DIR=artifacts/root/cache/uv \  
  uv sync --locked --group dev \  
.venv/bin/bijux-pollenomics run-lra --help
```

The development group includes the host, optional engine and maintainer tools. The report extra declares its Markdown parser. PDF exports additionally need XeLaTeX, latexmk, Graphviz and the named fonts in the renderer instructions.

A previous clean built-wheel install ran R-free examples on this platform. The dated public-index check found no engine release; a public extra-install route remains unverified.

Evidence: `pyproject.toml`; `uv.lock`; `reports/architecture/lra-distribution.md`

Tracked evidence and private source bytes serve different roles

- Tracked source identities, derived ledgers and rights-safe report text identify the result being discussed.
- Lawful original transports, restricted workbooks and article packets remain in the qualified source store; readers do not acquire reuse rights from a citation.
- An immutable manifest binds source revision, bytes and declared selection. Synthetic fixtures retain their synthetic labels.
- New inputs go through custody, schema and scientific admission before a historical LRA run.

Neither a modern lake centroid nor an alternative chronology proves the historical core/window/basin used in a publication.

Evidence: `reports/science/source-cohorts.md`; `reports/needed/README.md`

A bounded workflow: export one canonical paper account

This example requires no restricted raw source. The report and inventory must match the committed revision. Choose an output directory that does not exist:

```
SOURCE_DATE_EPOCH=1790812800 PYTHONDONTWRITEBYTECODE=1 \  
  .venv/bin/python -m bijux_pollenomics_dev.reader_reports \  
  --repository . --inventory reports/science/paper-accounts.csv \  
  --paper-id regional-reveals-theory \  
  --output artifacts/jobs/contributor-paper-example
```

Read the PDF beside its receipt: canonical text, citation links, source/producer hashes and compiler logs. Inspect every page before retaining an export.

This is a report workflow, not a new reconstruction or independent scientific confirmation.

Evidence: `reports/exports/papers/README.md`; `packages/bijux-pollenomics-dev/src/bijux_pollenomics_dev/reader_reports/README.md`

What the example verifies and what it leaves open

Checked boundary	Remaining scientific boundary
Canonical Markdown matches committed bytes; unsupported markup refuses. PDF contains tables, diagrams, citations and embedded fonts. Local paths become commit-pinned URLs; receipts retain hashes.	Partial original-paper access remains explicit; new source facts require review. Untagged PDFs need separate accessibility and actual colleague reading checks. Online repository availability awaits publication; private evidence is not embedded.

If the source changes, rebuild only its affected export; a passing unchanged PDF does not cover new text.

Evidence: `reports/exports/papers/manifest.json`; `reports/exports/papers/visual-review.json`

LRA requests use the host's explicit admission contract

- `validate-lra-input` checks the typed request and its source evidence. `run-lra` creates an exploratory bundle in a new directory.
- A request declares count units, taxa, parameters, physical basin/rings, age support, evidence identities, exclusions and uncertainty omissions.
- Missing/incompatible engines, invalid inputs and nonconvergence return structured refusals. Successful computation remains `generated_exploratory`.

REVEALS estimates regional vegetation; LOVE estimates local vegetation using regional background. Pollen prediction, modeled cover and measured-vegetation accuracy need distinct targets.

Evidence: `docs/public/pollenomics/interfaces/cli-surface.md`; `docs/public/pollenomics/architecture/lra-engine.md`

A new source or producer needs a real input closure

- ➊ Add custody and permitted-use evidence under the owning source family. Validate source schema, identities, population and explicit refusals.
- ➋ Keep training inputs separate from target outcomes; freeze predictions before scoring. Physical-site grouping and prior exposure remain visible.
- ➌ A producer reads authenticated parents, writes only its owned paths and accounts for every attempted/refused unit.
- ➍ Link its result, manifest, reproduction command and limitation from the canonical report and affected public consumer.

Do not generate a matching output by copying the tracked result into its supposed independent input.

Evidence: `reports/architecture/ownership.md`; `reports/science/pollen-prediction.md`

Mixed report owners must survive publication

Surface	Owned role
reports/	Scientific interpretation, exact evidence routes, needs and portable exports.
docs/report/	Multiple governed numeric/source producers; a complete re-build must assemble their independently verified outputs.
docs/public/	Rights-safe website explanations and supported application routes.
presentation/	Source-locked PDF briefings with editable LaTeX.

The publisher owns one portion of the report tree. Never replace the mixed tree with that portion; full independent no-difference reconstruction remains open.

Evidence: `reports/architecture/ownership.md`

Select checks from the boundary that changed

For report text and PDF identity, begin with:

```
PYTHONDONTWRITEBYTECODE=1 .venv/bin/python reports/verify.py  
.venv/bin/python docs/report/pollen-reconstruction/verify_report.py  
.venv/bin/python presentation/build.py
```

Source data needs rights/schema/count/admission checks; numerical code needs its affected oracle, failure and uncertainty cases. A changed public route needs the strict site build and its actual browser/export consumer. A package change needs its installed wheel/metadata boundary.

Use existing unchanged receipts only within their input scope. The final stable release candidate still needs its complete integration matrix.

Evidence: reports/verify.py; docs/report/pollen-reconstruction/verify_report.py; presentation/build.py

Diagnose a refusal at its owning boundary

- **Source lock changed:** review the changed claim/source; rebuild the affected export before accepting its new identity.
- **Compiler timeout:** inspect the retained log; correct the source or tool/font environment and rerun into an isolated directory.
- **Unsupported scientific input:** name the missing core/age/basin/count/parameter/rights field and request its authority.
- **Failed numerical fit:** retain diagnostic and coverage rows; do not convert the failure to a zero score.

Human reading, source decisions and qualified scientific review remain explicit inputs; model review does not supply them.

Evidence: `reports/needed/README.md`; `reports/science/model-use.md`; `presentation/README.md`