

Entomologist interview questions

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What to expect

Entomologist interviews blend technical knowledge, field experience and practical judgement. Employers want to see that you can identify insects accurately, design and carry out surveys, analyse data and communicate findings to land managers or regulators.

- **Technical knowledge:** Questions on insect taxonomy, sampling methods, statistical analysis and the use of tools such as R, QGIS and taxonomic keys.
- **Field and safety:** Questions about fieldwork protocols, work health and safety, remote area logistics and specimen handling.
- **Behavioural:** Questions about teamwork, attention to detail, communication and managing competing priorities during surveys or reporting.
- **Scenario or problem-solving:** Hypothetical situations such as a possible exotic pest incursion, a pest outbreak on a farm or a biodiversity assessment with limited data.
- **Advisory or client-facing:** Questions about explaining technical findings to growers, land managers or policy staff who may not have a science background.

Interviews often start with a short introduction and a discussion of your qualifications and past projects. You might be asked to walk through a recent survey or research piece, followed by technical and scenario questions. For research or government roles, a panel may include a senior entomologist, a hiring manager and sometimes a biosecurity or client representative. Some employers include a short written exercise or a presentation on a relevant topic.

1. Can you describe your process for identifying an unknown insect specimen?

Why they ask

This tests your practical taxonomy skills and your familiarity with keys, microscopy and reference collections.

How to structure your answer

Walk-through: start with specimen preparation, then keying out, cross-checking with reference material, and confirming identification. Mention tools and any verification steps.

Example answer

"I start by examining the specimen under a microscope and noting key morphological features such as wing venation, antennae and mouthparts. I then use a taxonomic key for the relevant order or family, working through couplets carefully. If I reach an identification, I cross-check against reference specimens or the Atlas of Living Australia to confirm the distribution and known variability. For difficult groups, I may consult a specialist or preserve the specimen for molecular analysis. I always record the identification details and any uncertainty in the database."

2. Tell me about a time you had to manage a field survey under challenging conditions.

Why they ask

Fieldwork often involves heat, rain, remote locations or tight timelines, so employers want to see resilience and planning.

How to structure your answer

STAR: Situation, Task, Action, Result. Focus on how you adapted, communicated and kept the survey valid.

Example answer

"During a biodiversity survey in a remote area, we had a week of unexpected heavy rain that flooded access tracks. My task was to complete insect sampling across five sites with a small team. I adjusted the schedule to prioritise sites with safer access, switched to hand collection near the base camp, and used the downtime to process specimens and back up data. I kept the team informed and updated the client on delays. We completed all five sites within the extended timeframe and the data quality was not compromised."

3. You are called to investigate a possible exotic pest incursion on a farm. What steps do you take?

Why they ask

Biosecurity is a core part of many entomology roles, and this tests your judgement under pressure and your knowledge of reporting protocols.

How to structure your answer

Judgement under pressure: clarify the report, assess risk, take immediate containment actions, report to authorities, and plan follow-up.

Example answer

"First I would gather details from the caller: location, crop or habitat, what they saw and when. I would treat it as urgent and attend the site if safe to do so, wearing appropriate PPE. I would collect samples carefully, take photos and record GPS coordinates. If the insect matches a suspect exotic pest, I would advise the grower to avoid moving plant material and I would immediately contact the state biosecurity authority. I would then help with delimiting surveys and provide a written report to support any official response."

4. How do you approach analysing ecological data from insect surveys?

Why they ask

Entomologists need to turn field data into meaningful findings, so this probes your statistical and software skills.

How to structure your answer

Explain your approach: data cleaning, exploratory analysis, choosing appropriate models, and interpreting results for a non-specialist audience.

Example answer

"I begin by cleaning and organising the data, checking for errors or missing values. I then do exploratory analysis to look at species richness, abundance and patterns across sites. Depending on the question, I use statistical modelling in R or GenStat, such as generalised linear models or multivariate methods for community composition. I also use QGIS to map distributions. Finally, I write up the results in plain language, highlighting what the data can and cannot tell us, and I share reproducible code so others can check the work."

5. How would you explain the importance of pollinators to a grower who is sceptical about conservation?

Why they ask

Advisory skills matter because you often need to influence land management decisions without lecturing.

How to structure your answer

Client-facing: listen to their concerns, link pollination to their production goals, give local evidence, and suggest practical actions.

Example answer

"I would start by asking about their current practices and any concerns they have about yield or input costs. Then I would explain that many crops benefit from insect pollination, and that healthy pollinator populations can support more consistent fruit set. I would use local examples from similar farms if I had them, and avoid jargon. I would suggest a simple trial, such as leaving a nearby flowering strip, and offer to help monitor insect visits. The aim is to show that conservation can align with their bottom line, not compete with it."

6. Describe a time you had to work with a team to achieve a research outcome.

Why they ask

Entomology projects often involve field assistants, lab staff, data analysts and clients, so teamwork and communication are essential.

How to structure your answer

STAR: Situation, Task, Action, Result. Emphasise your role, how you coordinated, and what the team achieved.

Example answer

"On a project assessing pest pressure in a horticultural region, I worked with a field team, a data analyst and a grower liaison. My task was to coordinate sampling across multiple orchards while keeping everyone on schedule. I set up a shared calendar and a simple data entry template, and held short weekly check-ins to flag issues. When one site became inaccessible, I reorganised the roster so we could still collect comparable samples. The project delivered a full dataset on time, and the grower group used our findings to adjust their monitoring program."