Weekly Progress Report (October 21-27, 2025)

What did you do?

Key accomplishments include:

- Added comprehensive timeout error handling with user-friendly messages ("API took too long to respond. Consider refining your request to reduce response time") across all API endpoints using asyncio.wait_for() with proper exception catching
- Spatial Distribution Service Integration: Refactored the ALA Spatial Service to focus on user-essential endpoints only (expert distribution by LSID and distribution map images), removing unnecessary technical endpoints for cleaner architecture
- Extended the existing parameter resolver system to support spatial distribution queries, enabling automatic LSID resolution and caching for improved performance

What new capabilities does your agent have?

The agent now has several production-ready enhancements:

- Retrieves up to 1000 occurrence records per query, significantly reducing pagination needs and improving user experience for large datasets
- All API calls now include 30-second timeouts with specific error messages, preventing hanging requests and providing clear feedback when queries are too broad
- The spatial distribution tool intelligently handles both species names ("Tasmanian Devil") and direct LSIDs (https://biodiversity.org.au/afd/taxa/...), automatically detecting input type and routing appropriately

What problems are you facing?

- The enhanced parameter extraction occasionally produces empty params: {} for simple queries, requiring fallback to direct string processing in some workflow methods
- Managing the interplay between enhanced parameter extraction, parameter resolution, and dual-input workflow methods requires careful coordination to avoid conflicts

What will you do next week?

- Finalize the spatial distribution workflow refactoring and test the parameter resolver integration for distribution queries
- Implement the get_species_images tool with the same production-ready standards (timeout handling, dual input support, enhanced artifacts)
- Conduct comprehensive testing of all four main tools (occurrence search, BIE search, spatial distribution, species images) to ensure consistent behavior and performance
- Monitor and optimize the increased page sizes for real-world query performance,