

***Associate Insect Biosystematist***  
***Essential Task Rating Results***

<b>Task #</b>	<b>Task Statement</b>
1	Provide accurate and timely identification of insects and other invertebrate specimens of all life stages includes both native and foreign in origin which may be actual or potential pests of California agriculture.
2	Identify digital images of specimens and report results.
3	Provide expert scientific consultation to internal and external clients such as state, federal and county personnel, as well as industry stakeholders.
4	Study various groups of arthropods and other pest groups contributing to the discovery and description of new species and development of identification tools to species.
5	Participate in collaborative research projects on native and invasive species with international, state, federal and local agencies.
6	Prepare research proposal and grant applications to obtain funding from external agencies including the National Science Foundation and the United States Department of Agriculture.
7	Maintain photographic collection of assigned insect groups and associated pertinent literature files.
8	Evaluate and make recommendations on pest issues such as pest ratings and pest status.
9	Maintain professional contacts with scientific colleagues throughout the world.
10	Analyze scientific publications in relation to plant pests and organisms of concern for California agriculture and the environment.
11	Utilize molecular methods for diagnosis of plant pests and organisms of concern for California agriculture and the environment.
12	Conduct independent research to further the accumulation of knowledge about insect systematic and diversity including insects and other invertebrates that are potential or actual threats to California agriculture using classical and/or molecular techniques as related to diagnostic capabilities, understanding of evolutionary pathways and relationship, and solving of difficult taxonomic problems.
13	Publish research results in peer-reviewed scientific journals.
14	Provide peer review for manuscripts submitted to scientific journals by other scientists.
15	Participate in various professional meetings and societies including involvement in committees and working groups in areas of expertise

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16	Develop and give training sessions, using a variety of media and in different settings, on field recognition of assigned groups of insects and other invertebrate groups of State, County and University field personnel and workshops on identification of insects and other invertebrates for larger networks
17	Prepare specimens for molecular analysis using standard operating protocols.
18	Perform diagnostics using molecular techniques to determine population origins, species identities, or genomic strains for certain key pest species (e.g., Mediterranean fruit fly, Asian gypsy moth, Africanized honey bees).
19	Collaborate with local county agricultural commissioners in areas relating to pest analysis and identification.
20	Coordinate with other scientists in the laboratory especially involving emergency projects and pest databases.
21	Serve on committees and panels to evaluate grant and project proposals from other scientists within area of expertise
22	Serve on expert panel in area of expertise includes federal panels related to invasive insects and other invertebrates.
23	Collaborate with scientist from USDA and Systematic Entomology Laboratory to solve complex pest related taxonomic problems and with USDA and National Identification Services to assist with pest problems at the federal level.
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25	Perform analysis of the sexual maturity, female mating status, or sterility of submitted specimens of certain key pest species (e.g., Mediterranean fruit fly) where such knowledge would assist in pest detection or eradication efforts.
26	Use molecular techniques to determine population origins, species identities, or genomic strains for certain key pest species (e.g., Mediterranean fruit fly, Asian gypsy moth, Africanized honey bees).
27	Develop or participates in the development of more accurate interactive identification keys for groups of insects or other invertebrates in area of expertise.
28	Conduct field work to build the resource base of arthropod specimens of both native and foreign origin, housed in the California State Collection of Arthropods, which serves as a primary resource for making identifications of pest groups.
29	Compile and maintain data on the distribution and status of insects and other invertebrates of potential economic significance to agriculture using a variety of suitable spreadsheets and/or databases.
30	Develop and maintain properly classified reference collections of literature in area of expertise.
31	Prepare data and reports on insect specimens for court cases and acts as a technical witness in areas of expertise.

<b>Task #</b>	<b>Task Statement</b>
32	Develop new diagnostic technologies as required for new and emerging pest organisms of potential threat to California agriculture and the environment.
33	Communicate and cooperate in a professional and effective manner with supervisors, management, coworkers, and various state and county agencies, organizations, private citizens, and other clientele by utilizing tact and interpersonal communication skills to establish and maintain effective working relationships in all situations.
34	Operate standard office equipment such as copiers, computers, fax machines, calculators, telephones, and other technical equipment; maintains inventory and accountability of equipment and supplies.
35	Attend mandatory administrative training on subjects such as defensive driving, sexual harassment, workplace violence etc., as per department policies.
36	Record, review, update, and maintain complex diagnostic test data and records, environmental records, reports, etc., on laboratory worksheets, log books and/or electronic databases to ensure accuracy of diagnostic test data.
37	Prepare neat, detailed and complete reports from data collection procedures and diagnostic tests performed using correct grammar and spelling.
38	Maintain, update, and use Standard Operating Procedures and various other manuals and procedures including but not limited to material safety data sheets (MSDS)