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Example Completed: Colony Insect Welfare Monitoring and Record-Keeping Log

Laboratory/Project Name: Main Lab/ AW00231

Species: *Gryllus bimaculatus* (Field Crickets)

Colony ID / Enclosure Number: *G. bimaculatus* (Thailand) / #12

Principal Investigator: Dr XXXXX

Responsible Staff/Observer: Dr XXXXXXX

Start Date: 06/09/24 End Date (if applicable): 06/09/25

Frequency of Checks (e.g., Daily / Twice Daily / Weekly): Twice Daily

Note the last page for acceptable thresholds. Ensure this is printed for ease of reference.

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Section 1: Daily Welfare Monitoring Log

Date	Time	Observer	Temp (°C)	Humidity (%)	Food Checked (Yes/No)	Behaviour Normal? (Yes/No)	Notes (feeding, clustering, distress, deaths)
19/06/2025	08:00	XXXXX	29	52	Yes	Yes	All crickets active; normal feeding.
19/06/2025	17:00	XXXXX	28.5	50	Yes	Yes	No issues noted.
20/06/2025	08:00	XXXXX	29	48	Yes	Yes	Normal activity; fresh greens accepted well.
20/06/2025	17:00	XXXXX	28.8	51	Yes	Yes	Clustering at heat pad overnight, normal.
21/06/2025	08:00	XXXXX	29.2	53	Yes	Yes	All behaving normally, no deaths.
21/06/2025	17:00	XXXXX	28.9	50	Yes	Yes	Sound levels normal for mating calls.
22/06/2025	08:00	XXXXX	29	52	Yes	Yes	All active, no visible

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							stress indicators.
22/06/2025	17:00	XXXXX	28.7	49	Yes	Yes	Feeding good; enclosure clean.
23/06/2025	08:00	XXXXX	29.1	54	Yes	Yes	No signs of illness or injury.
23/06/2025	17:00	XXXXX	28.6	47	Yes	Yes	Normal behaviour observed.

Section 2: Removed / Deceased Individuals

Date	**No. Removed**	**Reason (e.g. distress, death)**	**Action Taken (e.g. euthanised, isolated)**	**Notes**

Section 3: Enclosure Maintenance Log

Date	**Action Taken (e.g. cleaning, feeding)**	**Observer**	**Notes**
19/06/2025	Feeding (greens + protein mix)	XXXXX	Initial setup; feeding dish cleaned and filled.
21/06/2025	Spot cleaning and feeding	XXXXXX	Uneaten food removed, substrate clean.
23/06/2025	Feeding	XXXXXX	Added orange slices for hydration.

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Section 4: Species-Specific Welfare Notes (Optional Summary)

Use this section to summarise any observed patterns, concerns, or deviations from expected behaviour or husbandry. This can support ethics reviews, lab meetings, or updates to SOPs.

Colony stable since setup on 19/06/2025. All environmental parameters within optimal range (28–30°C, 40–60% humidity). No deaths or removals recorded in first five days. Feeding routine and behaviour (nocturnal calling, grooming, exploration) consistent with expected welfare norms. Standard diet of leafy greens and high-protein feed maintained. No intervention required.

Reminder: This document forms part of your lab's welfare assurance and may be submitted as a supporting document in ethics applications. Store securely and retain in accordance with institutional data policies.

Last updated: 23/06/2025 by XXXXXXXX

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Printable Colony Welfare Summary Poster

Normal Behavior and Appearance

Species-specific activity patterns:
Field crickets are primarily nocturnal and gregarious. They are most active during the evening and nighttime hours, exhibiting increased movement, mating calls (chirping), and social interaction at these times.

Typical movement, feeding, grooming, and interaction:
Healthy crickets exhibit purposeful walking, occasional jumping, and regular antennal movement. They feed on a variety of plant and protein-based foods and are often seen grooming their antennae and limbs. Males produce chirping sounds to attract mates or establish territory, while both sexes may engage in brief antennal fencing or exploratory interactions.

Physical appearance:
Crickets in good condition have intact legs and antennae, an upright and alert posture, clean and unblemished exoskeletons, and symmetrical wings in adults. Any loss of limbs, lethargy, abnormal posture, or dull coloration may indicate poor welfare or emerging health issues.

Preferred Environmental Ranges

Temperature: 28–30°C

Humidity: 40–60%

Light cycle: 12h light / 12h dark

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Handling Tips

Crickets should be handled gently and only when necessary to minimise stress or injury. Use soft tools such as fine paintbrushes, featherweight forceps, or gentle suction devices to move individuals when direct handling is not possible. Minimise handling duration and disturbance by scheduling transfers or observations during their less active periods (typically during daylight hours, as they are nocturnal). When transferring individuals, avoid overcrowding in containers or holding areas to reduce the risk of injury, stress-induced aggression, or escape. Always ensure enclosures are secure before and after any handling procedure.

Signs of Stress, Injury, or Illness

Crickets showing signs of stress, injury, or illness may exhibit one or more of the following behaviours or physical changes. Lethargy or a marked reduction in activity during peak hours (evening or night) is a common early indicator of welfare issues. Unresponsiveness to stimuli (e.g. gentle prodding or changes in light) or a failure to feed when fresh food is provided can signal underlying health problems.

Physical signs include damaged or missing wings or limbs, discolouration of the exoskeleton, or tremors and uncoordinated movement. Crickets that become isolated from the group, especially in a normally gregarious species, or display abnormal postures (e.g. dragging limbs, slumped stance, or lying on their side) should be monitored closely and, if necessary, removed for isolation, treatment, or humane euthanasia.

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Anaesthesia, Euthanasia, and Emergency Intervention

For procedures requiring immobilisation, crickets may be anaesthetised using isoflurane vapour in a controlled chamber or via brief chill immobilisation (≤5 minutes at 4°C), depending on the facility and ethical approval. Anaesthesia duration should be kept to the minimum necessary to avoid distress or physiological harm.

Euthanasia is performed using rapid immersion in liquid nitrogen, which causes immediate insensibility and is widely regarded as a humane method for invertebrates in laboratory settings. This method must only be used by trained personnel.

In the event of an emergency, such as signs of severe injury, unresolvable distress, or disease, affected individuals should be immediately removed and isolated from the main colony. All incidents must be documented and reported to the supervising researcher or designated welfare officer for evaluation and, if needed, appropriate intervention or humane termination.