Prevention and Treatment of Bed Bugs in the Library
Procedural Manual

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This procedural manual shall be made available by the employee training team and at the library branches.

I. ONE-SHEET BED BUG ACTION LIST

A. STAFF

PROTECTIVE GLOVES, ZIPLOC-STYLE BAGS, AND AN AIRTIGHT PLASTIC TUB SHOULD BE PLACED STRATEGICALLY NEAR YOUR BOOK DROP FOR EMERGENCY USE.

1. Observe personal safety protocols: gloves, masks, etc... whatever you need to be safe.

2. Maintain a thick border of diatomaceous earth around the perimeter of your book drops and use other bug control methods as instructed. Replenish regularly. Note: Household insect spray does not deter bed bugs.

3. Empty your bookdrops (book bins) frequently, per your branch’s standard. The emptier the book drop is, the fewer items affected and the easier to resolve (bed) bug problems.

4. Inspect all items carefully for everything: bugs, bug droppings, mold, missing components, wetness, stains, food residue, smoke smell, rips/scratches/breakage, writing, any other damage.

5. If you find evidence of bugs (live/dead, eggs, droppings, etc), quarantine immediately. Use Ziploc-style bags to isolate offending items. **If in doubt, isolate.** (See pp. 8 & 9.)

6. Inform Manager/supervisor. Do not discharge the item(s) until approved.

7. Once Manager/Supervisor has all the info they need, proceed with treatment.
   a. For those items that can be heat treated, use the branch’s bug heater.
   b. For items that can be cleaned, such as discs, wash and/or alcohol spray them.
      i. Absolutely no eggs, droppings, or encrusted bug evidence may remain.
      ii. Alcohol spray does not kill or deter bed bugs. It is simply for cleaning.
   c. For other items, withdraw and discard in closed/sealed plastic bags in the dumpster, not in wastebaskets in the building.
   d. If in doubt, throw it out.

B. SUPERVISOR/MANAGER

1. Gather patron info, titles; check patron record(s) for any notes.

2. Inform the Library Division Manager immediately.

3. Review the Patron Conduct Policy.


5. Communicate with patrons.

6. Restrict patron account and perform other corrective actions according to procedures and instructions from management.

7. Update your branch staff.
II. RECOGNIZE A BED BUG

Meet *Cimex lectularius* (a.k.a., the common bed bug)

The Bed Bug - Apple Seed Comparison

Photo credit: Louis N. Sorkin, BCE, Entsult Associates, Inc. [https://www.flickr.com/photos/lou_bugs_pix/6710289181/]
The Bed Bug - Baby German Cockroach Comparison

When determining whether you are looking at a German cockroach nymph or a small bed bug, there is one thing to look for:
• Is there a lighter spot in the middle of the abdomen?
If the answer is yes, you are looking at a baby German cockroach.

Other information to know:

• Female bed bugs will lay between one and five eggs a day.
• Eggs hatch in 6-15 days, depending on the temperature.
• Each developmental stage lasts about 1 week.
• Six weeks after hatching, a female could be ready to mate and start the cycle again.
III. IDENTIFY BED BUG DAMAGE

Identification: Examples of bed bug damage to materials

Identification: under the cover of a “single dot” book

You may only see a single dot on the outside of the book...

...but on the inside, you will see that the book really has been around bed bugs.
Identification: further examples of bed bug damage to materials

Identification: the prime bed bug hiding spot
Identification: further examples of bed bug damage

It is also not uncommon for bed bugs to be caught inside of a book, and to be squished inside either the front or back cover.

Identification: further examples of bed bug damage

It is important to look underneath book jackets, as bed bugs consider it a very good place to hide. On the left, you can see the remains of a bed bug that was squished between the book and the cover. Below, you can see two dead early instar nymphs.
IV. QUARANTINE

**Live Bed Bugs**

1. After manager approval, check the item(s) in and put in unavailable status (a system card).
2. Quarantine the item(s). If possible, include captured or now-dead bug(s) in the bag. Items with live or dead bugs, or dead bug staining, MUST be double bagged; items with no sign of pest infestation may be single bagged. Write “LIVE BUG” on any bags with live bugs.
3. If the item was found in a book drop, all items in the book drop with the bug must be quarantined for close inspection. The entire book drop will need to be disassembled, if necessary, and completely sprayed down with rubbing alcohol, which cleans the area but does not kill bed bugs.
4. If the item was found on a counter, all items that were returned by the same customer, or that were left on the counter with the offending item, need to be quarantined for close inspection. Spray the counter down with rubbing alcohol, which cleans the counter but does not kill bed bugs.
5. If the item was found on a shelving cart, all items on the cart and the cart must be quarantined for close inspection for signs of infestation. TWO staff members then closely inspect each item on the cart. If no signs of infestation are found in any item or in the crevices of the cart, then the books may be shelved. Spray the cart down with rubbing alcohol, which will clean the cart, but will not kill any bed bugs.
6. If the item was found on a shelf, inspect the items on that shelf, one shelf above, one shelf below, one shelf behind, and the crevices and the rungs of the shelf. If no signs of pests are found, nothing further needs to be done. If signs are found, bag the items on those shelves and quarantine them for closer inspection. TWO staff members then closely inspect each item on the cart. If no signs of infestation are found in any item or in the crevices of the cart, then the books may be shelved. If signs are found, treat the items with heat, by washing (discs), or discard.
7. If the infested item is a piece of furniture, bag or wrap the item in place, without moving it, so that bugs do not fall off the furniture and spread around. Quarantine the furniture and treat by heat, residual chemical, or steam. If untreatable, communicate with management for possible disposal/replacement.
8. If the infested item is computer equipment, isolate the equipment, let it cool, wrap in protective plastic or bag tightly in large trash bag. Consult with IT team for further instructions.
9. If infestation is in the building (walls, air vents, etc), inform Administration and submit a Facilities work order immediately.
10. If infestation is in employee lockers, all surrounding lockers must be closely inspected and all suspect items removed and washed/cleaned.

**Dead Bed Bugs & Staining**

1. After manager approval, check the item(s) in and put in unavailable status (a system card).
2. Quarantine the item(s). If possible, include the dead bug(s) in the bag. Items with dead bugs, or dead bug staining, MUST be double bagged; items with no sign of pest infestation may be single bagged.
3. If the item was found in a book drop, all items in the book drop with the bug must be inspected by TWO staff members. If no other signs of infestation are found, the book drop will not need to be disassembled but should be completely sprayed down with rubbing alcohol, which cleans the area but does not kill bed bugs.
4. If the item was found on a counter, all items returned by the same customer or left on the counter with the offending item, need to be quarantined for close inspection. Spray the counter down with rubbing alcohol, which cleans the counter but does not kill bed bugs.
5. If the item was found on a shelving cart, all items on the cart and the cart must be quarantined for close inspection for signs of infestation. TWO staff members then closely inspect each item on the cart. If no signs of infestation are found in any item or in the crevices of the cart, then the books may be shelved. Spray the cart down with rubbing alcohol, which will clean the cart, but will not kill any bed bugs.
6. If the item was found on a shelf, inspect the items on that shelf, one shelf above, one shelf below, one shelf behind, and the crevices and the rungs of the shelf. If no signs of pests are found, nothing further needs to be done. If signs are found, bag the items on those shelves and quarantine them for closer inspection. TWO staff members then closely inspect each item on the cart. If no signs of infestation are found in any item or in the crevices of the cart, then the books may be shelved. If signs are found, treat the items with heat, by washing (discs), or discard.
7. If the infested item is a piece of furniture, bag or wrap the item in place, without moving it, so that bugs do not fall off the furniture and spread around. There may be eggs on the furniture. Quarantine the furniture and treat by heat, residual chemical, or steam. If untreatable, communicate with management for possible disposal/replacement.
8. If the infested item is computer equipment, isolate the equipment, let it cool, wrap in protective plastic or bag tightly in large trash bag. Consult with IT team for further instructions.
9. If infestation is in the building (walls, air vents, etc), inform Administration and submit a Facilities work order immediately.
10. If infestation is in employee lockers, all surrounding lockers must be closely inspected and all suspect items removed and washed/cleaned.

Quarantine Scenarios, continued

**Live Bugs:** More urgent, because the item has recently been exposed to bugs.

**Dead Bugs or Damage:** Prompt questions about how long the bugs or damage has been there; may have to consider previous borrowers; may never be able to figure out the customer with the problem.

**Book Drops:** Need to quarantine everything in the book drop and thoroughly clean book drop due to transference.

**Book Trucks:** Need to inspect everything on the book truck, but only quarantine suspicious items.

**Book Shelves:** May need to look at surrounding items but not quarantine them, or may need to quarantine several shelves worth of suspicious materials.

### About Quarantining DONATIONS

Donations of materials, particularly to the Friends of the Library, are a way of life. Staff needs to be just as careful with these materials as with items from the Library’s collection. Some recommendations/tips to remember:

- A brief visual inspection by staff is recommended when Friends/Volunteers are not on site to personally accept the donation(s). If not possible, discuss with manager what is possible for your branch and be sure to communicate your decision to staff.

- Do not even take the items into the building if they look very old, dusty, have spots, have lizard droppings, have silverfish or spiderwebs, etc.

- If boxes are closed and staff has no time for a brief visual inspection, keep boxes in a separated area for FOL volunteers to sort, preferably in an isolated corner of a closet used for this purpose or on a remnant, each surrounded by diatomaceous earth (your Quarantine Square).

- If donors bring loose books and ask for a cart, load the cart and again bring it in and inspect as described above. (Unless they are really bad, in which case, leave out on back porch and after patron leaves roll it right to the dumpster).

- When donors give you material for programs, grocery bags, textiles, yarn, etc, staff should perform a careful inspection at an isolated desk, not at the Service Desk or on a desk with other materials on it. Yarns and textiles require careful inspection and with all of these items, if in doubt, isolate.

These recommendations should be adapted to the branch’s needs, then communicated to staff and to Friends Volunteers. Everyone should be clear about that branch’s procedures related to bed bugs and any bugs (and unacceptable donations).
The Quarantine Toolkit

Each circulation or, depending on the branch, shelve’s counter should have a quarantine toolkit that includes:

- Heavy duty Ziploc-style bags
- Protective gloves
- Airtight plastic tub(s) for storing and transporting bagged materials
- A spray bottle filled with isopropyl (rubbing) alcohol.

There should also be an out of the way, secure spot to store materials that are in quarantine.

Additional Toolkit Items:

- A flashlight; a UV flashlight
- A magnifying glass
- A library system card for placing quarantine holds
- Access to reports on item and patron borrowing history, if available

Inspection – Print materials

Step 1: Inspect page edges

Step two: look inside the front and back covers of the book

Step 3: Look under the book jacket, at both the book...

...and the cover
Other Notes about Furniture:

- If you find bed bugs in your furniture, your first instinct may be to get the piece of furniture out of the public eye as quickly as possible. **This is NOT what should happen**, as the chair could shed bed bugs as it is being moved across the library. Instead, the chair should be quarantined in place, either by wrapping it with shrink wrap or placing it in a furniture bag. Once quarantine wrappings are in place, the chair can be moved to the official quarantine area.

- Should you end up discarding a piece of furniture rather than treating it, you should disfigure the furniture in some way, possibly by removing its legs or spray painting an ‘X’ on it, to make it less desirable to passersby.

After bed bugs are introduced into a library environment via personal belongings, clothing, or returned materials, bed bugs will do what comes most naturally to them: they will try to hide themselves in a tight, warm, dark space, close to a food source. i.e., they may try to hide in your library chairs. The arrows point to some of the more common areas bed bugs will try to hide.
V. TREATMENT

For Library Materials, treatment options for bed bugs may include:

**Chemicals (Fumigation)** – used for materials and facilities.
**Chemicals (Residual)** – used as a preventive measure in facilities
**Heat** – used for materials and facilities
**Steam** – used for furniture

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**Treatment options: heat**

Based on studies conducted by Drs. S. A. Kells and M. J. Goblirsch, the National Pest Management Association developed best practice guidelines for pest management professionals when dealing with bed bugs. Relating to heat treatment, their recommendations for the time needed to kill all bed bug life stages, including eggs, are:

<table>
<thead>
<tr>
<th>Internal Temperature</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
<td>113°F (45°C)</td>
<td>7 hours</td>
</tr>
<tr>
<td>118°F (48°C)</td>
<td>90 minutes</td>
</tr>
<tr>
<td>122°F (50°C)</td>
<td>&lt; 1 minute</td>
</tr>
</tbody>
</table>

http://www.pestworld.org/all-things-bed-bugs/best-practices/guidelines/#bp1292

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For Library Furniture, treatment options may include:

**Heat** – used for materials and facilities
**Chemicals (Residual)** – in the crevices, seams, and folds of the furniture
**Steam!** – effective for furniture

NOTE: General, over-the-counter pesticides/insecticides, as well as household cleaning sprays or rubbing alcohol, do not kill bed bugs.

REMEMBER:
*If in doubt* (about the effectiveness of treatment, after you have tried everything), *throw it out.*
VI. PATRON RELATIONS (Managers & Supervisors)

Supervisors and managers should work together with the Library Division Manager to ensure proper messaging to the public.

Staff:

1. Reply to patron inquiries about the affected branch(es) according to the press release or instructions given by management.
2. When concerned patrons call about the safety of unaffected branches, staff may reply:

   “Thank you for your concern. Materials from the affected branch are completely quarantined and absolutely not allowed to go to other branches. All branches are cleaned thoroughly throughout the day. Any items that show signs of bedbugs or other insects are isolated and heat treated or disposed of. Each library is regularly visited by pest control services. The bedbugs at one of our branches in 2020 were an isolated incident that has never occurred before in the history of Pasco County Libraries and has not spread to any other branch.”

Managers and Supervisors:

First, determine if a patron has a bed bug problem.

If an item is returned with bugs or damage:

- Place holds on all items currently checked out to that patron and any other patrons at that residence.
- Run a report of items that the patron has returned in the last month so that those items can be inspected for bugs or damage.
- If no other damage is found, then see if you can get a report of which other patrons have borrowed that item recently, then follow the steps above for those patrons.
- Accept that you may not be able to determine the correct patron who has the problem.

Second, formulate a contact plan.

- Plan what you will say.
- Consult the Patron Conduct Policy, the Division Manager, etc.

Third, contact the patron(s) affected. Remember to update your branch staff.
SUGGESTED TALKING POINTS
For Contacting Patrons Regarding an Infestation in Their Residence

- [The library] found [live bugs/signs of bed bugs] in items you returned recently. Have you had any issues with bugs around your house/apartment/residence? Perhaps did your pest control skip a month?
- **If yes:** Explain that we perfectly understand that bugs are a way of life in Florida. Even so, the library needs to maintain the safety of the collection, facilities, and other customer’s residences, so all the borrowing privileges for all patrons at the address will need to be suspended.
- **If no:** Ask if the items in question were loaned to anyone else who might have an issue? Were they carried in a bag or transported in a vehicle that belonged to someone else?
- If you believe that the items in question may have been exposed elsewhere, you may choose not to suspend privileges at that time, upon management’s permission.
- If they try to lay the blame on the library, which they may try to do particularly if you have had to close a branch due to bed bugs in the past, explain that bed bugs are everywhere now: doctor’s offices, hospitals, schools, colleges, hotels, etc, but that the library now has strict protocols in place to combat bed bugs. One of the reasons for your call is to ensure that all patrons and materials are protected. Ask if they have traveled anywhere recently. Have they been to the movies? Have they been to a doctor’s appointment?
- Recommend that they talk with their landlord or association if they live in a multi-family residence situation (i.e. apartment, duplex, condominium) because it could be that their neighbor has a problem that has not been treated. Bed bugs have been known to travel through air ducts, on wires in walls, and through pipes.
- Patrons may react to this phone call with a variety of emotions: anger, confusion, tears, or embarrassment. Be prepared for anything. At no time should you say that their residence is in some way dirty or not well maintained. *Focus on the items returned.* If they are ashamed, you may want to reassure them that there is nothing to be ashamed of, that bugs are a way of life in Florida, and that they are certainly not alone.