WHAT IS CLAIMED IS:

1. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the drum being at a tilt such that said first end is higher than said second end to enable flow from said first end to said second end, wherein said openings comprise gaps between discs, a size of each opening being defined between respective discs, the discs having a first edge and a second edge, and wherein at least some of said discs have a longitudinal cross section of which at least one side is convex at said first edge and flat along said second edge.

2. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the drum further comprising a helix shape in said interior to cause flow through said interior as said helix is rotated, wherein said openings comprise gaps between discs, a size of each opening being defined between respective discs, the discs having a first edge and a second edge, and wherein at least some of said discs have a longitudinal cross section of which at least one side is convex at said first edge and flat along said second edge.

3. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the drum being mounted and motorized for rotating, the drum being located below water outlets, the outlets being configured to pour water on said openings as said openings rotate past said water outlets to flush out insects stuck in said openings, the openings comprising gaps between discs the discs having an inner extent, the

drum being mounted for raising and lowering with respect to an external water level between a first position wherein inner extents of said discs at a lower side of said drum are submerged and an second position in which at least the drum internal surface is above water level.

4. The device of any one of the preceding claims, the drum being located against a bank of mechanical protrusions, the mechanical protrusions being configured to extend into said openings as said openings rotate past said mechanical protrusions to clean out insects stuck in said openings.

5. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the drum being mounted and motorized for rotating, the openings comprising gaps between a plurality of discs, the discs each having a respective inner radius, the discs comprising a first class of discs interspersed with a second class of discs, the inner radius of discs in the first class of discs being smaller than the inner radius of discs in the second class of discs, said discs of the first class of discs thereby extending further into said interior than said discs of said second class of discs.

6. The device of any one of the preceding claims, comprising an internal pipe for injecting water into said interior to flush said openings.

7. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the drum being mounted and motorized for rotating, the device comprising at least one collection container underneath said drum to collect said insects exiting through said circumference and a controller configured to exchange said collection container when full of insects.

8. The device of claim 7, comprising a funnel underneath said drum, the funnel leading to said collection container, to collect said insects exiting through said circumference, and an indicator located at said collection container to provide an indication when said collection chamber contains a pre-defined number of insects.

9. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the openings comprising gaps between discs the discs having an inner extent, the drum being mounted for raising and lowering with respect to an external water level between a first position wherein inner extents of said discs at a lower side of said drum are submerged and a second position in which at least the drum internal surface is above water level.

10. The device of claim 9, the drum comprising a helical screw rotatably mounted to rotate relative to the drum to propel insects and water from said first end to said second end.

11. A device for sorting insects into two or more classes based on size, the device comprising a drum, the drum having an interior being closed circumferentially and openings defined along said circumference, and said insects being introduced to said drum at a first end, the openings being sized to allow a first class of said insects to exit said drum through said circumference while further classes are retained to travel to a second end, thereby sorting said insects into said at least two classes, the circumference being divided into at least two sections, each section having a spacing sized for a predetermined and respectively different class of insects and at least one opening sized for said respectively different class of insect, a second end of said drum being open for exit by a third class of insects, said third class of insects being unsorted by said two sections.

12. The device of claim 11, being configured for flow of water through said drum from said first end to said second end, to allow said third class to flow out of said second end.

13. The device of any one of claims 1 to 9, 11 or 12, comprising a rotating screw inserted into the drum.

14. The device of any one of claims 1 and 3 to 13, comprising a helical shape built onto an interior of said circumference.

15. The device of any one of the preceding claims, wherein the at least two classes are male and female pupae, the male and female pupae being of different sizes and said openings being of a size selected to allow male pupae to pass through but to inhibit female pupae.

16. The device of claim 15, wherein the at least two classes are three classes, larvae, male pupae and female pupae, the drum comprising two sections, a first section with openings sized for larvae, and a second section with openings sized for male pupae.

17. The device of claim 16, wherein said at least two classes are four classes, larvae, small male pupae, large male pupae and female pupae, the drum comprising three sections, a first section with openings sized for larvae, a second section with openings sized for small male pupae and a third section with openings sized for large male pupae.

18. The device of claim 16, or claim 17, comprising an input at said first end, the input for receiving a mixture of water, larvae and male and female pupae, the input comprising a pourer for pouring said mixture into said drum.

19. The device of claim 18, wherein the pourer is configured to pour out said mixture into said interior in a plane of said first end.

20. The device of claim 16, wherein the pourer is configured to pour said mixture into said interior over a length of said drum.

21. The device of any one of claims 1, 5 to 9, 11 and 12, wherein said drum is a stationary mounted half drum.

22. The device of any one of claims 1, 5 - 9, 11 and 12, wherein said drum is rotatably mounted.

23. The device of claim 4 wherein said mechanical projections are mounted to a frame via a tensioned mount.

24. The device of any one of the preceding claims, wherein said openings comprise cuts in a cylinder.

25. The device of any one of claims 1 to 23, wherein said openings comprise gaps between discs, a size of each opening being defined by a spacer between respective discs.

26. The device of claim 25, wherein at least some of said discs have a longitudinal cross section comprising convex outer edges and flat interiors.

27. The device of claim 25 or claim 26, wherein at least some of said discs have a longitudinal cross section that is flat.

28. The device of any one of the preceding claims, comprising drainage collection underneath said drum and a pump to recirculate water from said drainage for reuse in said drum.

29. The device of claim 1, the drum being mounted such that the angle of said tilt is adjustable.

30. The device of claim 3, wherein the rate of pouring is adjustable.

31. Apparatus for continuous insect rearing comprising:
a first circular production line rearing larvae to a pupa stage;
a second circular production line rearing pupae to an adult stage;
and a pupa unloading station configured to unload pupae from said first production line onto said second production line, wherein said pupa unloading station comprises a device for sorting said pupae into male and female pupae, thereby to supply sex-sorted pupae to said second circular production line, and wherein said device for sorting is the device of any one claims 1 to 30.

32. Apparatus according to claim 31, wherein said first circular production line comprises larva breeding trays containing larva in water, and said second production line comprises pupa breeding trays, and wherein said production lines are synchronized to provide pupa breeding trays to empty said larva breeding trays into waiting pupa trays.

33. A method of sorting pupae into at least a first class and a second class based on size, comprising:
introducing pupae into a drum having openings large enough for pupae of a smaller of said classes to pass through but too small for pupae of a larger class;
causing water to flow through said drum to carry said pupae past said openings;
flushing water through said openings from within said drum to carry out said pupae of said smaller class for collection below said drum;
flushing water from outside said drum downwardly onto said drum to flush back into said drum pupae of said larger class that are stuck in said openings; and
raising and lowering the drum with respect to an external water level between a first position wherein said drum is submerged and a second position in which at least an internal passageway of said drum is above water level.

34. A device for sorting insects into two or more classes based on size, the device having openings, and said insects being introduced to said device at a first end, the openings being sized to allow a first class of said insects to exit said device while said second class is retained to travel to a second end, thereby sorting said insects into said at least two classes, the openings comprising discs and gaps between said discs, the discs having an inner extent, the device being mounted for raising and lowering with respect to an external water level between a first position wherein inner extents of said discs at a lower side of said device are submerged and a second position in which at least an internal surface is above water level.