

The background of the slide is a light beige or cream color with a subtle, fine-grained texture. On the left side, there is a large, dark, irregular ink splatter that extends towards the center. This splatter consists of many small, dark dots and larger, more defined circular spots, creating a sense of movement and artistic expression. The overall aesthetic is clean but with a touch of organic, hand-drawn quality.

Lice (Phthiraptera)

- Lice can be a menace to humans, pets, and livestock, not only through their blood-feeding or chewing habits, but also because of their ability to transmit pathogens.
- Most of the approximately 5000 known species of lice are ectoparasites of wild birds or animals and have no known medical or veterinary importance.
- The order Phthiraptera is divided into two main groups, **sucking lice** and **chewing lice**.

Taxonomy

- The order Phthiraptera is divided into four suborders;
 - The Anoplura (sucking lice)
 - The Amblycera
 - The Ischnocera
 - The Rhynchophthirina
- Collectively known as chewing lice or biting lice
- About 550 species of sucking lice have been described.
 - Sucking lice of medical importance are assigned to two families, the Pediculidae and Pthiridae, whereas sucking lice of veterinary importance are assigned to five families, the Haematopinidae, Hoplopleuridae, Linognathidae, Pedicinidae, and Polyplacidae.

Morphology

- Lice are small (0.4-10 mm in the adult stage), wingless, dorso-ventrally flattened insects.
- The elongate abdomen possesses sclerotized dorsal, ventral, or lateral plates in many lice; these provide some rigidity to the abdomen when it is distended by a blood meal or other food source.
- In adult lice the abdomen is 11-segmented and terminates in genitalia and associated sclerotized plates.

Life History

- Lice are hemimetabolus insects.
- Following the egg stage, there are three nymphal instars, the last of which molts to an adult.
- Although there is wide variation between species, the egg stage typically lasts for four to 15 days, each nymphal instars for three to eight days, and adults live for up to 35 days.

Lice of Cattle

- Cattle lice are a major problem worldwide.
- Both dairy and beef breeds are affected.
- Domestic cattle can be parasitized by five species of lice: two species of *Haematopinus*, one *Linognathus*, one *Solenopotes*, and one *Bovicola*.

- The cosmopolitan cattle biting louse (*Bovicola bovis*) is the only species of chewing louse to infest cattle.
- The adult female is about 1.7 mm in length.
- The preferred host site for this louse is the top line of the back, especially the withers area from which it spreads to the rump and poll area.

- The longnosed cattle louse (*Linognathus vituli*) is also a worldwide pest.
- Adult females and males are about 2.4 and 1.8 mm in length, respectively.
- The species is widely distributed over the body of the host but preferred infestation sites the shoulder, back, neck, and dewlap.

- The little blue cattle louse (*Solenopotes capillatus*) is also worldwide in distribution.
- It is a common species on cattle

- The cosmopolitan shortnosed cattle louse (*Haematopinus eurysternus*) is the largest louse found on cattle in worldwide.
- Adult females and males measure 2.9 and 2.3 mm in length, respectively.
- Preferred infestation sites are the top of the neck, the dewlap, and brisket.

- The cattle tail louse (*Haematopinus quadripertusus*) is a tropical sucking louse.
- The cattle tail louse is larger than closely related shortnosed cattle louse.
- Adult females of this louse, which normally are found on the distal area of tail, oviposit on the tail hairs.

Bovicola equi

- The horse biting louse (*Bovicola equi*) is the most important louse of equids worldwide
- Adult females and males average about 1.9 mm and 1.3 mm, respectively.
- This louse typically infests the side of the neck, the flanks, and tail base but can spread to most of the body with the exception of the mane, tail, ears, and lower legs.

Haematopinus asini

- *Haematopinus asini*, the horse sucking louse, is worldwide in distribution
- Although commonly occurring on horses, donkeys, and mules, it has also been reported on zebras.
- The adult females and males are 3.0 mm and 2.3 mm, respectively.
- Generally, it is found in the areas of coarse hair avoided by horse biting louse: the forelock, mane, base of the tail, and above the hooves.

Haematopinus suis

- Domestic and wild swine are parasitized by one louse species, the hog louse (*H. suis*).
- This is a large species of sucking louse in which adult females measure 5 to 6 mm in length, and the males measure over 4.1 mm.
- Hog lice normally frequent skin folds of the neck, the ears, the tender skin behind the ears, inside of the legs, and inner flanks of swine.

Bovicola ovis

- Domestic sheep are parasitized by several species of sucking lice and chewing lice.
- Worldwide, the sheep biting louse, *Bovicola ovis*, is the number one louse problem on domestic sheep.
- Females of the louse are about 1.8 mm long and males are around 1.0 mm.
- In the winter, when louse populations are high, most *B. ovis* are found on the back and mid-sides of the sheep.

Lice of Cats and Dogs

- Domestic cats are parasitized by one species of chewing louse whereas dogs are parasitized by two species of chewing lice and one species of sucking louse.
- The cat biting louse (*Felicola subrostrata*) parasitizes both domestic and wild cats.
- It may occur almost anywhere on the body.

- Both the dog biting louse (*Trichodectes canis*) and the dog sucking louse (*Linognathus setosus*) parasitize dogs and closely related wild canids.
- *T. canis* usually infests the head, neck, and tail region of dogs where it attaches to the base of a hair using its claws or mandibles.
- *L. setosus* occurs primarily on the head and neck and may be especially common beneath collars.

Lice of Laboratory Animals

- Mouse louse (*Polyplax serrata*)
- The spined rat louse (*Polyplax spinulosa*)
- The tropical rat louse (*Hoplopleura pacifica*)
- The rabbit louse (*Haemodipsus ventricosus*)

Lice of Poultry

- The chicken body louse (*Menacanthus stramineus*) is most common and destructive louse of domestic chickens.
- Unlike other chicken lice, it is found on the host's skin rather than the feathers.
- Adults measure 3 to 3.5 mm in length.

Menopon gallinae

- Adults of the shaft louse (*M. gallinae*) measure about 2 mm in length, and may be seen in a line along the shaft of a feather.
- Although these lice do not normally rest on the skin, they quickly disperse to the skin if disturbed.

Human lice

- Human body louse (*Pediculus humanus humanus*)
- Human head louse (*Pediculus humanus capitis*)
- Human crab louse (*Pthirus pubis*)

Public health importance

- Epidemic Typhus (*Rickettsia prowazekii*)-body louse
- Louse-Borne Relapsing Fever (*Borrelia recurrentis*)-body louse
- Trench Fever (*Bartonella quintana*)-body louse.

Veterinary Importance

- Swinepox (Pox virus)-*Haematopinus suis*
- Bovine dermatomycosis (*Trichophyton verrucosum*)-Cattle lice
- Double-pored tapeworm (*Dipylidium caninum*)-*Trichodectes canis*-
Dogs, humans

Prevention and Control

- Several techniques have been used in attempts to rid humans and animals of lice and louse-borne diseases.
- Preventing physical contact between lousy persons or animals and the items they contact, as well as various chemical, hormonal, and biological control mechanisms comprise the current arsenal of techniques.
- Chemicals used to kill lice are called pediculicides.