

Rabbit

Cuniculture

Practice of breeding and raising rabbits as livestock for their meat, fur or wool.

family-Leporidae

Order-Lagomorpha

Name: *Oryctolagus cuniculus*



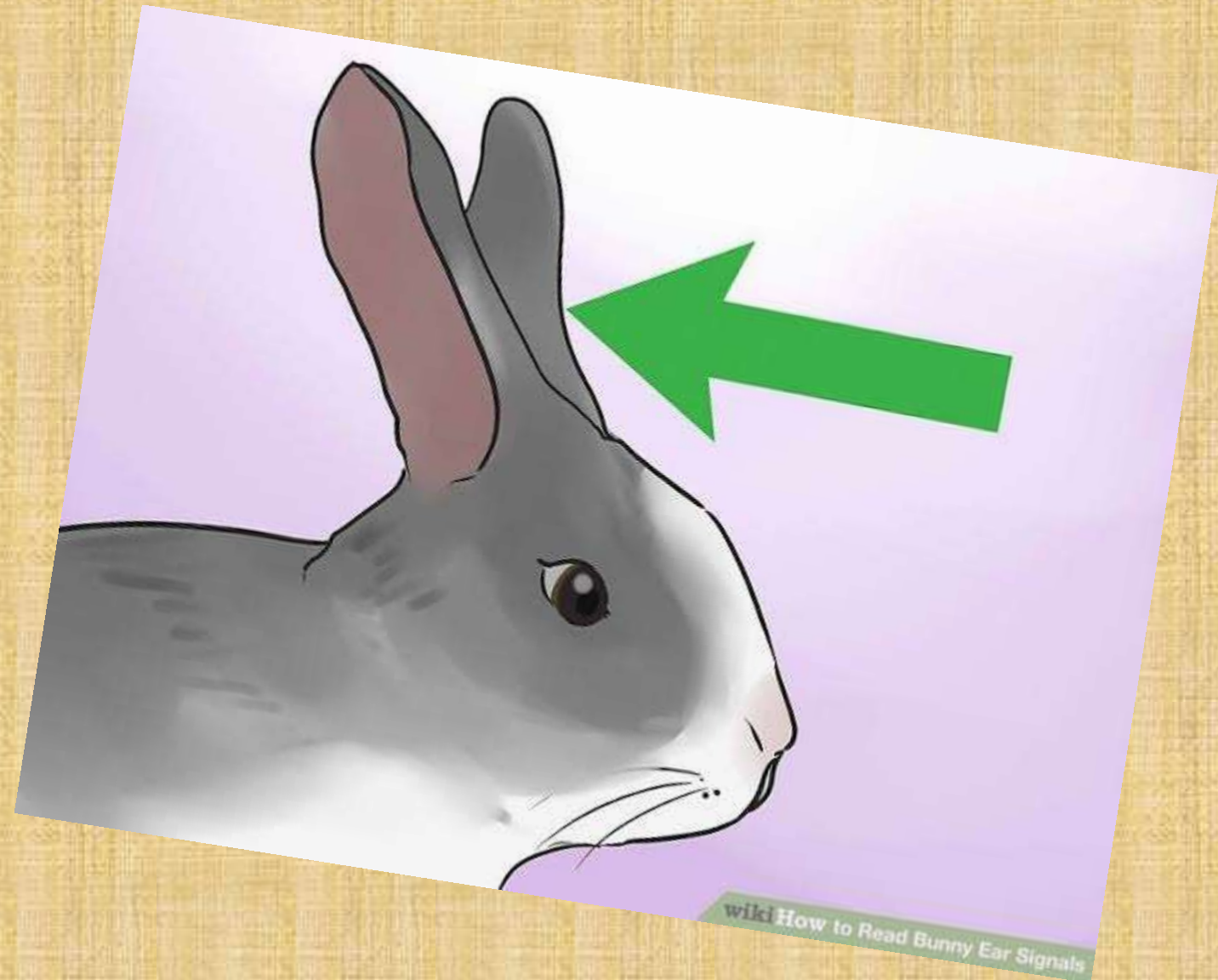
Terminology

- Male rabbits - *bucks*
- females - *does*
- young rabbit - *bunny*
- A group of rabbits - *colony* or *nest*
- A group of baby rabbits produced from a single mating is referred to as a- *litter*
- a group of domestic rabbits living together is sometimes called a - *herd*



Ears

- For [thermoregulation](#)
- Detect predators
- Rotate their ears [270 degrees](#)
- Allowing them to detect any threats that might be approaching from close to 2 miles away.
- More surface area means more places for body heat to escape
- The optimal body temperature is around 38.5–40°C



Sleep

- Rabbits may appear to be [crepuscular](#),
- But their natural inclination is toward [nocturnal](#) activity



General

- They can't live on only on carrots.
- Carrots are high in sugar and contribute to tooth decay .



world's largest rabbit breed

- [Flemish giant rabbit](#)
- Reaching 2.5 feet in length and weighing up to 22 pounds.
- 9 - 12-year lifespan.



Reproduction

- A doe's reproductive system doesn't follow cycles;
- Ovulation is triggered by intercourse.
- 30-day gestation period
- Give birth to a litter about 4 to 12 kits



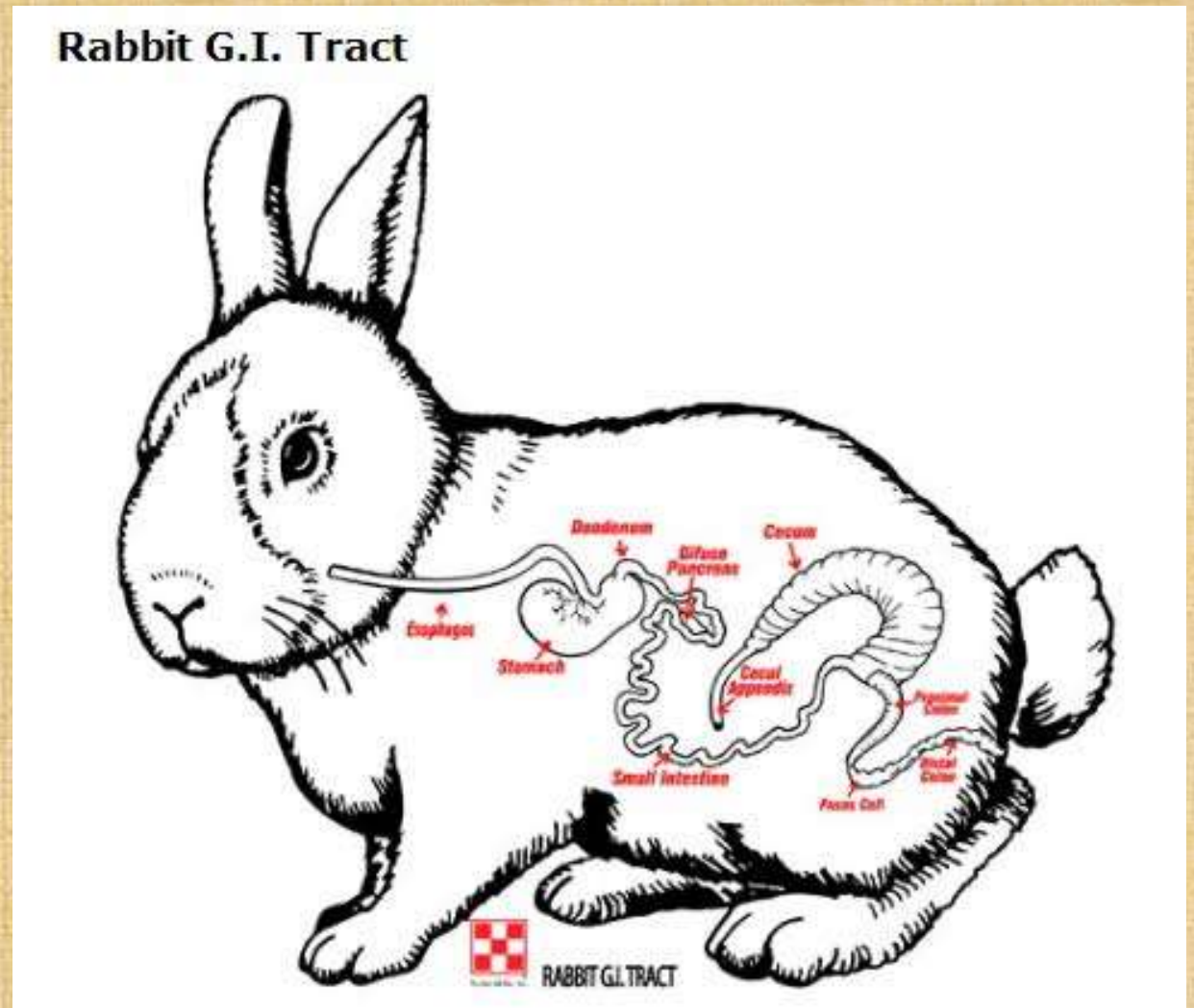
Auto coprophagy

- They eat their own faces
- They produce a special type of faces called *cecotropes*
- That are softer than their normal pellets and meant to be eaten.
- Rabbits have a fast-moving digestive system, and by re digesting waste.
- They're able to absorb nutrients their bodies missed the first time around.



THEY CAN'T VOMIT

- Rabbits groom themselves like cats do.
- Rabbits are remarkably hygienic by [licking](#) their fur and paws.
- This means rabbits generally don't need to be bathed by their owners like some other pets.
- The rabbit digestive system is physically incapable of moving in reverse. Instead of producing hairballs,
- Rabbits deal with swallowed fur by eating plenty of roughage that pushes it through their digestive tract.



Their vision covers nearly 360 degrees.



- Their vision covers nearly [360 degrees](#)
- Allows them to see what's coming from behind them, above them, and from the sides without turning their heads.

THEY ARE GOOD JUMPERS



- Those impressive back legs aren't just for show. Rabbits are built for evading predators in a hurry,
- According to Guinness World Records, the highest rabbit jump reached [3.26 feet](#) off the ground and the farthest reached nearly [10 feet](#).
- Top speed of 18 mph

THEIR TEETH NEVER STOP GROWING

- Rabbit's teeth will [keep growing](#) if given the chance.
- A rabbit's diet in the wild includes a lot of gritty, tough-to-chew plant food that would eventually wear down a permanent set of teeth.
- With chompers that grow at a rate of up to 5 inches a year,
- Any damage that's done to their teeth is quickly compensated for.
- The flip-side is that domestic rabbits who aren't fed abrasive foods can suffer from overgrown teeth that can make it difficult for them to eat.

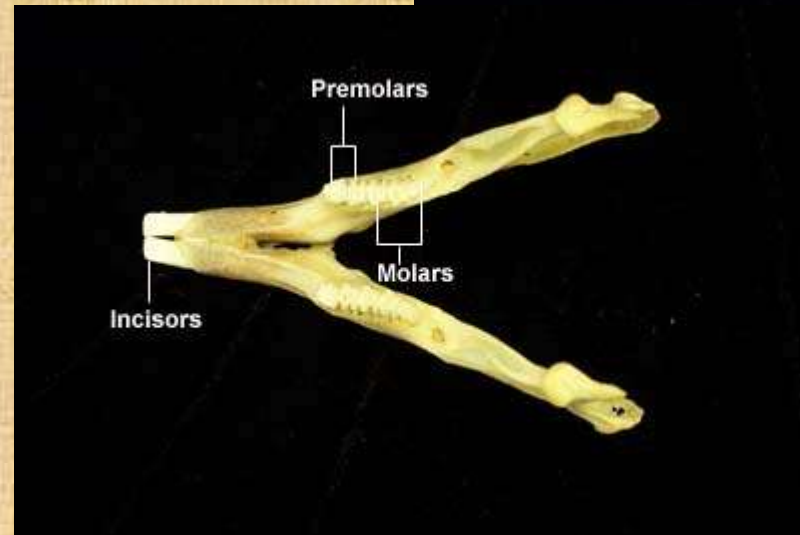
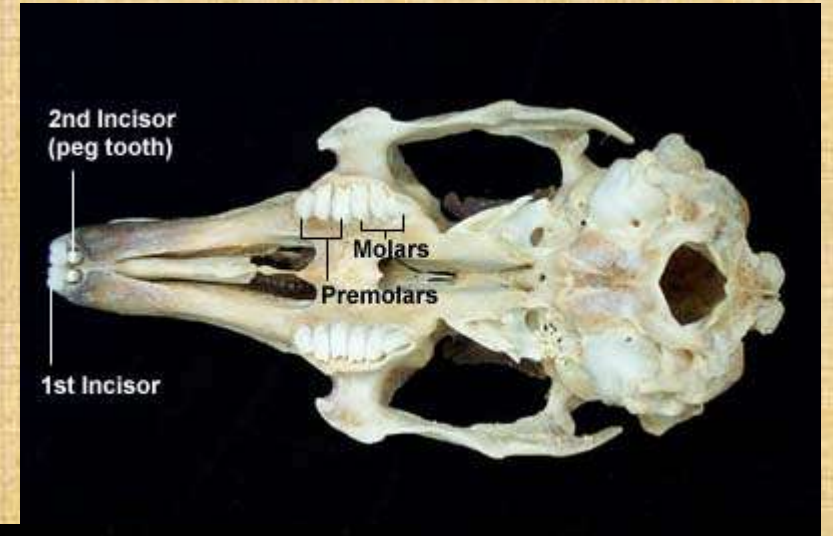


Dental formula

- Rabbits are herbivores.
- Their teeth are unrooted and so grow continually. Like rodents,
- Rabbits may need their incisors trimmed if they are overgrown.
- Rabbits have an interesting arrangement of their upper incisors in that the second incisor is behind the first incisor.
- The second incisor is referred to as the **peg tooth**

Dental Formula

$$\text{Permanent} \quad \frac{2 \ 0 \ 3 \ 3}{1 \ 0 \ 2 \ 3} = 14$$



THEY LIVE IN ELABORATE TUNNELS CALLED *WARRENS*.

- Rabbits dig complex tunnel systems, called [*warrens*](#),
- That connect special rooms reserved for things like nesting and sleeping.
- The dens have multiple entrances that allow the animals to escape in a pinch,
- And some warrens are as large as [*tennis courts*](#) and extend 10 feet below the surface.



- **Rabbit meat**

- contains **high ratio of protein**, energy, calcium and vitamin than any other types of animal meat.
- The amount of cholesterol, fat and sodium is also less than other meat.
- Their meat is very tasty, nutritious and easily digestible for all aged people.
- And there are no religious taboo for consuming rabbit meat.
- They can consume very low quality food and turn this foods to high quality meat, skin or fiber.



Advantages of Rabbit Farming

- Rabbits are very **fast growing** animal.
- Their **food converting rate** is better than other animals.
- One female rabbit can give birth about **2 to 8 kids each time**.
- Rabbits can be raised within a **short space**.
- **Production costs are less**, compared to other large sized animals.
- Rabbit **meat is very tasty**, nutritious and easily digestible. All aged people can eat without any problem.
- There are **no religious taboos** consuming rabbit meat.
- **Kitchen wastes**, grass, plant leaves etc. Are favourite foods of rabbit. So, you can raise some rabbits for your family needs, using this type of low cost and easily available commodities.
- Rabbit farming require **less labour** compared to another animal farming business. You can easily use your family labour for successful commercial rabbit farming business.
- Commercial rabbit farming business require relatively **less capital** and you will get back your investment within a very short period.
- As it is a highly profitable business, so commercial production can be a great source of earning and employment



Rabbit Breeds

- Dark Gray
- [Fox](#),
- [Dutch](#),
- [New Zealand White](#),
- New Zealand Black,
- New Zealand Red,
- Belgium White and
- [Chinchilla](#)



Rabbit Farming Method

Deep Litter Method:

- For less number of rabbits.
- Concrete floor is more suitable for deep litter system.
- Make 4 to 5 inches depth litter husk, hay, straw or wood shavings.
- Raise a maximum of 30 rabbits in a house.
- Keep the male rabbits in a separate room from the female.
- In deep litter system, risks of diseases is high.
- It may very difficult to manage the rabbit in this system.



Cage Method:

- For commercial rabbit farming business
- Kept in a cage, which are made with wire or iron plate.
- Useful for raising a maximum number of rabbits.
- Keep sufficient space and necessary facilities, inside every cage
- Keep the male and female rabbits separated from each other.
- Keep them together in a separate cage during breeding period.
- Cages are arranged at about 0.5-1 meter height from the ground
- Individual cages dimensions 60*60*60ccm
- For breeding buck and pregnant does 90*90*60ccm



Feeding

- Rabbits are herbivores with non-ruminant digestive system characterised by functional caecum similar to horse.

ingredient	percentage
Bengal gram	35%
groundnut cake	23.5%
wheat	30%
meat come bone meal	10%
mineral mixture	1%
salt	0.5%
total	100%

ingredient	percentage
Bengal gram	10%
groundnut cake	20%
gingelly cake	5%
rice polish	35%
wheat	28%
mineral mixture + salt	2%
total	100%

Feeding...

- Quantity of feed required varies with **body size** and physiological status
- Adult rabbits require about 150 to 200 grams of green fodder like green leaves grasses are good quality hay and 60-80 grams concentrate feeds.
- Extra feed allowance has to be given for pregnancy and lactation.
- Extra feed required for lactation has to be provided from 6 to 12 weeks @ extra 10 grams for each litter.
- Feed consuming rate and nutrient requirements varies, depending on the rabbit's age and breed type.



Feeding....

- For proper nutrition of adult rabbits, their food should contain
 - 17 to 18 percent crude protein,
 - 14 percent fiber,
 - 7 percent minerals and
 - 2700 kilo calorie/kg of metabolic energy.
- Green leafy vegetables, seasonal vegetable, spinach, carrots, muller, cucumber, green grass and vegetable wastes are common [food of rabbits](#).
- For commercial purpose, serve them poultry feed. In accordance with providing nutritious feed,
- For 1 kg body weight of rabbit, about
 - 40 grams of concentrate food and
 - 40 grams of green fodder is required
- Along with ad libitum supply of fresh and clean drinking water.



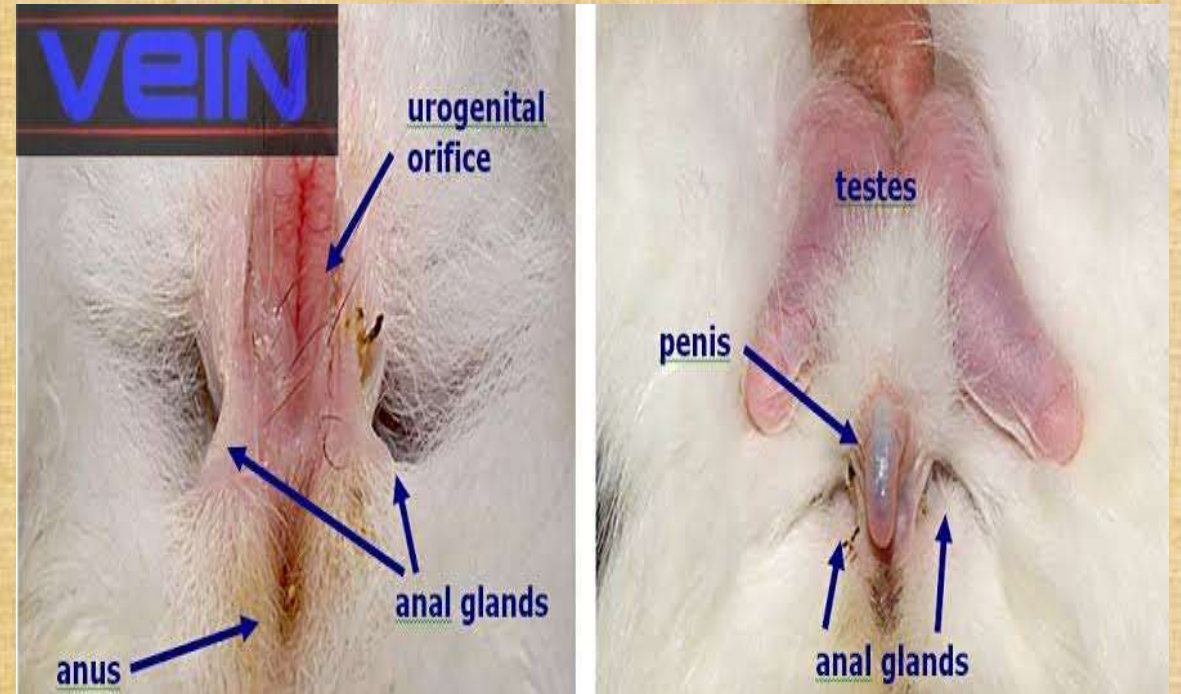
Breeding



- Mature and suitable for breeding within their **5 to 6 months of age**.
- But don't use the male rabbits for breeding purpose until they reach their first birthday. Doing this will ensure, quality young rabbits for commercial production.
- Always try to use **healthy rabbits** with proper body weight for breeding.
- Never bred the females, if they are ill.
- Take **special care to the breeding male and pregnant female** rabbits, and provide them nutritious feed.
- The gestation period of rabbits is about **28 to 31 days**.
- And each time a doe can give birth of **2 to 8 kids**.

Heat signs in the rabbits

- Restlessness,
- Reddening of vulva,
- Appearance mucus discharge from vagina.
- Rabbit are **induced ovulators** and completion of oestrus cycle occurs only upon meeting.
- Interval between two heats may not be regular.
- Once the breeding stock has attained sufficient size and age for puberty male and female can be mix for mating by putting them together in one cage.
- Heat signs are shown within 48 hours after putting male and female together.



Mating

- Mating is fast vibratory thrusting movements of hind quarters of the male followed by ejaculation.
- Successful mating is characterized by falling of the male towards sides or backward sometimes with loud crying.
- Ovulation occurs 8 to 13 hours after mating
- Pregnancy can be understood by palpating posterior abdomen of the female for enlarged uterus.
- Pregnant uterus can be felt as distinct round beads from 10 days onwards
- From 15 days there will be enlargement of abdomen. Doe it will become very conscious



Rabbit parturition (kindling)

- Under natural condition, female dig holes or caves for kindling and nest are prepared using grass.
- Loss of hairs from the body is an indication of approaching kindling
- Kindling process is very fast taking 30 minutes to 1 hour
- Usual litter size varies is from 8-12.
- Weight of litter varies with number and varies is from 15 to 30 grams



Bunnies



- Due to the short gestation period bunnies are not mature enough at birth.
- Hair coat begins to appear by about 10 days and eyes opened by 14 to 15 days. Ears also become functional by this age.
- Movement of bunnies are by crawling during earlier days and normal gait is started by about 20 days.
- Weaning can be done by 30 days.
- After kindling, rabbit does show fertile heat within 24 to 48 hours.
- But 2-3 weeks of post kindling service is better.
- Maximum litter size is obtained during third or fourth kindling

sexing of young ones

- Sexing of young ones can be made from 7 days, based upon the appearance of **anus and urinary opening**.
- At the time of birth anal and urinary openings are very close 1-2 mm below the tail.
- From 7 days onwards **in case of males**--- urinary hole moves away from the anal opening, its shape is retained round.
- **In case of females** distance between the anus and urinary openings remains the same and the shape of urinary opening transforms into cleft and extends away from anal opening.
- Scrotum appears only towards puberty

