## **Bats 101:**

## **Neonates**

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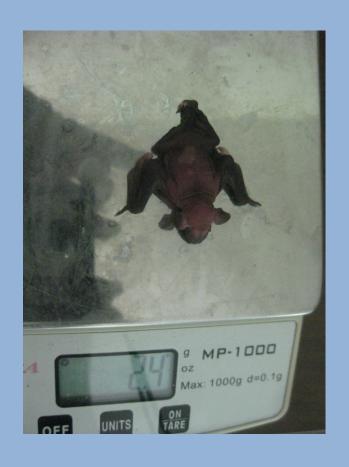
**WARM** 

WARM WARM WARM

**WARM** 

**WARM** 

# WARM!! WARM!!! WARM!!! WARM!!!





Scales weighing to tenths are preferred.

DON'T FORGET to get a tare weight on your container and cloths!!!!!

•Pups under 3g need to be monitored *very* carefully.

•Pay close attention to humidity and temperature.



•Give SQ fluids on intake, offer formula after second hydration.



### Feed only till stomach is full, not bulging. DO NOT OVERFEED! Learn to watch milk in stomach to prevent bloat





#### **Infant Housing in Emergencies**

- Heat supplied on bottom and side
- •Moisten towel underneath to provide adequate humidity (the younger the pup, the more humidity is critical, especially those under 3g)



- •Ideal temp is 85° F and 60% humidity
- •Pup can choose cloth at bottom or to hang as they grow, this setup provides variations in temps, adequate for pups up to about 3 wks old
- •Can combine pups after 48 hours of monitoring, watch for nursing, biting on wings (similar to squirrels, reduce time between feedings if this occurs)

## Infant Housing in Emergencies (con't)



## Incubator, (circulating air type)



#### Formula

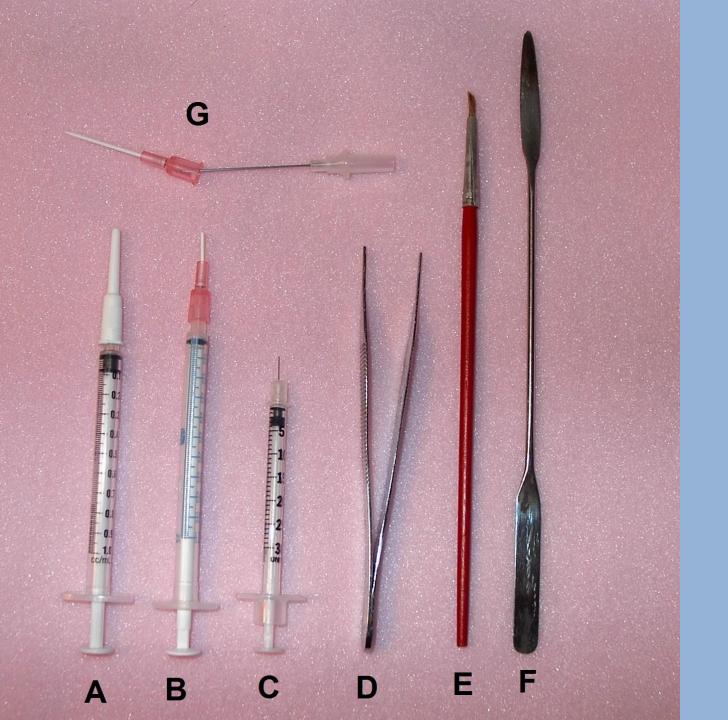
•Zoologic 33/40<sup>©</sup>; Fox Valley 32/40<sup>©</sup>, etc.

•Feed pup at rate of 5% body weight q 2-3 hrs 24/7 till weight is 8 g, then 6am to 11pm. But better to watch milk line

•Catheter tips, dental pics work well onto a 1cc feeding syringe with a cannula tip







**A:** 1.0cc syringe with cannula

**B:** 1.0cc syringe with trimmed IV tip

**C:** 0.3cc tuberculin syringe

**D:** Forceps

**E:** Child's paintbrush

**F:** Laboratory spatula

**G:** IV tip with needle

#### **Bloat**

- •Common problem as a result of overfeeding, must be addressed immediately. Pups can die quickly (within 24 hours) from overfeeding
- •If stomach is bloated at next feeding, immediately start strong mint tea
- •Substitute next feeding with tea, give dilute formula for following feeding.
- •Do not resume formula until normal stool is produced, then reintroduce dilute formula until balance is resumed

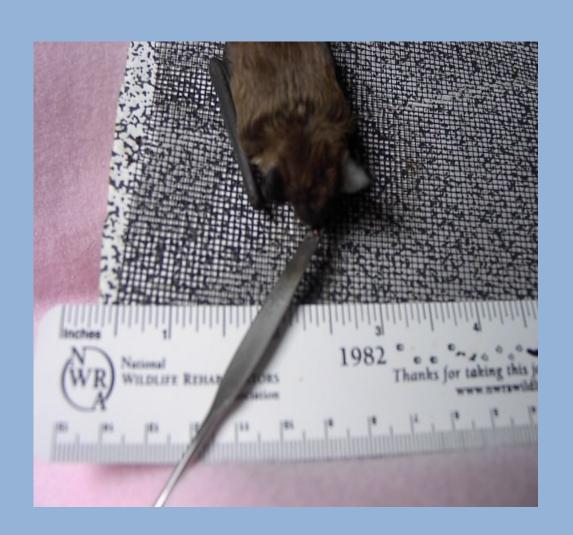


NOTE: Use 1 mint tea bag or a few tablespoons of fresh mint; add 1/4-1/3 cup of boiling water. Leave bag and/or leaves in to allow steeping. Refrigerate when cool.

#### **Additional care:**

- •Stimulate eyes-closed pups with cotton tip swab or soft tissue
- •Wrap in cloth or hold snugly when feeding. Keep very warm
- •Finish each feeding by offering water using drips on mouth or child's paintbrush

- •Offer mwm guts after formula feeding at around 10 days of age
- Once accepted,remove mwm head& squeeze intomouth



#### **Feeding Mealworms**

Food for approximately 10,000 mealworms:

Mwm Supplement Powder (see below)

50-75g

Leafy greens

1 cup

(unchopped dandelion greens, kale, beet greens, romaine-no

cruciferous vegetables or spinach)

Sweet potato and/or apple

1/2 sliced

Mwm Supplement Powder:

Cornmeal

210g

Oat bran

90g

Wheat bran

65g

\*Vionate© (MiracleCorp Products, Dayton, OH)

vitamin/mineral powder

215g

\*Calcium carbonate

215g

NOTE: Do not feed mwms to bats that contain morphed mwms (beetles). When receiving fresh mwms, discard bedding and make fresh to eliminate contamination with quinones. Feed mwms for a few days prior to feeding to bats (From Bats In Captivity, Vol. 3 Susan Barnard)

<sup>\*</sup>Both of these supplements are available through Chris Clark's, Squirrels and More online store (<u>www.squirrelsandmore.com</u> and other online sellers)

## Weaning

- •Offer formula from dish, once accepted, one feeding may be replaced by self feeding formula from dish.
- •Eliminate one feeding per day every 3-4 days
- •If housing multiples, keep close track of weights



## Weaning (con't)

- •Increase amount of mwms per feeding, feed with heads removed
- Most difficult part of weaning is getting pup to eat chitin
- •Allow pup to hold headless mwm while squeezing guts into mouth
- •Eventually pup will eat a piece of chitin...don't hold your breath, it will take awhile





### Weaning (con't)

- •Provide mwms 24/7
- •Once self feeding on mwms, discontinue formula slowly as with other mammals. Pups should be weaned between 6 -8 weeks. ALWAYS monitor weights
- •IMPERATIVE that mwms be fortified, especially with calcium for continued growth.



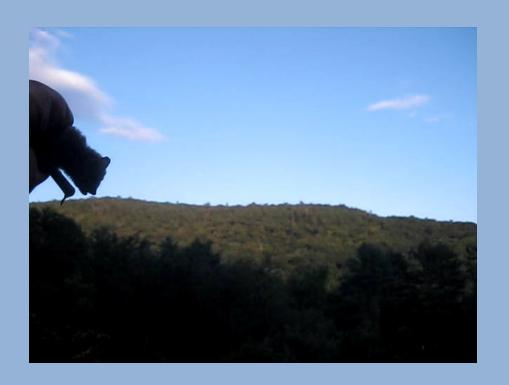
#### Release

- Experience with Mom or "Teacher Bat" is essential for survival
- "Moms" show feeding grounds, water sources and resting areas
- Release studies have shown that some species of pups released with small flight cage experience, typical of bat caregivers, barely survive a week in the wild\*

<sup>\*</sup>See IWRC Journal of Wildlife Rehabilitation, Volume 29, Nos. 2-3 2008. Abstract "Post Release Survival of Hand Reared Pipistrelle Bats"







## Questions????

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