

***How do Entomologists  
Contribute to  
World Hunger?***



2009/05/20 12:08

Montana Fish, Wildlife, and Parks; Penny Landon, District Administrator, Carbon Conservation District (Carbon County, Montana) hosts 150 local students May 2009 for a day of earth-friendly fun.



Eager hands politely wait their turn to spear a waxmoth larvae and navigate the sauces (Below and left).



Students learn and practice the safe, easy steps in preparation, serving, and eating this appetizer. Students practice the fine motor skill of spearing a boiled larva and earn a tasty reward!



University students also learn preparation and serving skills. Everyone learns why



***“Western Attitude”***

# ***The Students***

***SPP 465R Health, Poverty, Agriculture:  
Concepts and Action Research***

***BIOL 106CS***

***Issues of Insects and Human Societies***

# ***The Stories***



# *Northern Cheyenne People*



Dull Knife



2008/11/21 15:56



2008/11/21 09:58





# The Ute People And Westerners



# The Ute People And Westerners





# A Story from Rwanda



# Grasshoppers and Locusts









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# Nutritional Facts

## Complete proteins



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# International Locust Patrols

- USAID
- PRIFAS
- GTZ
- British Locust Control





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# What does it mean to be culturally competent?

Denial  
Defense  
Minimization  
Reversal  
Acceptance  
Adaptation  
Integration



Does it matter that many Westerners  
in influential positions are  
ethnocentric and create hunger and  
malnutrition throughout the world?



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# Nutritional Facts

- **Kwashiorkor** (diet deficient in complete protein [meat, eggs & dairy]), can cause permanent damage
- **Malian Diet consists of:** millet, sorghum, rice, corn, tomatoes, carrots, peanuts and cowpeas [incomplete protein by itself]



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# Health Statistics



\*These cases recovered. No deaths due to Kwashiorkor in 2009

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# Example of complete protein:

- *Oedaleus senegalensis*
- *Kraussaria angulifera*



Grasshopper are supplemental snacks for young children

# Nutritional aspect

- Young children (5-10 years old) need ~1g protein/kg bodyweight/day ☐ 19-34 grams protein

	Average Weight of insect	Protein content per 100 grams of weight	Protein content per insect (average)	Number of grasshoppers to be consumed to make up 10% of diet	
				5 year old	10 year old
male	0.313 grams	~20.6grams	0.1376g	27 OR	48 OR
female	0.688 grams	~20.6grams	0.07g	13	24

Compared to ~29 grams per 100 grams of lean beef

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# So What?

**Why do these small, pastoral villages in remote parts of the globe matter to those who live in urban areas?**

**What can “Westerners” learn from these indigenous peoples?**



# Isn't the Western Attitude changing?

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# Western Attitude

**REJECTED**

- Risk of pesticides should be assessed
- Risk of losing cultural richness
- Reassess holistic goals to identify current issues



# Recommendations



- Teach wherever you are
- Respect and recognize value in traditional wisdom
- Know principles of ethno-centrism and ethno-

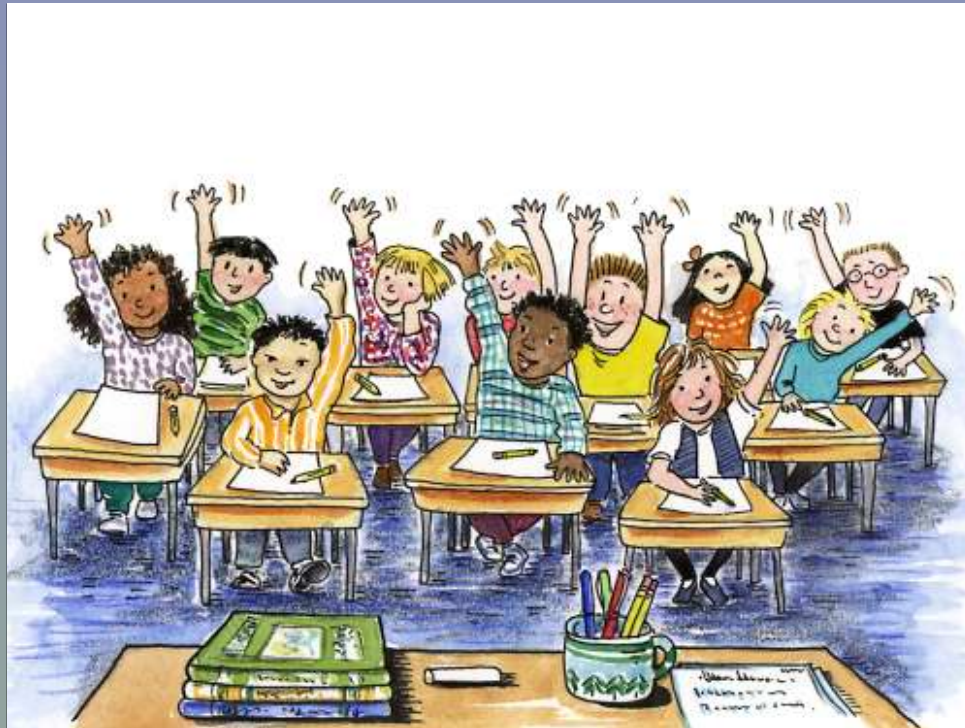


THANK  
YOU!



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# Questions?



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