Popular Survivor TV programs glorify survivalists & novices surviving wilderness experiences by building natural shelters & consuming raw animals & plants.

Research Questions?

- Many animals & plants recommended for consumption by survivalists are edible when cooked, such as crayfish, frogs, snails, & snakes, but what about raw consumption? If so, what are they & what are the risk factors?
- Do Survivor-recommended copycat raw animal & plant consumption result in potentially fatal food-borne poisonings & infectious diseases? If so, what are they & what are the risk factors?

Results: Infectious Diseases

In case-series analyses, Internet searches identified poisonings and infectious diseases following the outdoor consumption of raw plants & animals. Poisonings were confirmed by positive chromatography. Infections were defined by positive microscopic, serologic, or molecular diagnostics. Statistical significance was defined by P-values ≤ 0.05 with continuous variables analyzed by t-tests & categorical variables by Chi-squares (X²).

Pathologic Findings:

- 38 nonfatal cases of neuroangiostrongyliasis (NAS) with eosinophilic meningoencephalitis followed consumption of raw animals infected with the causative parasites, rat lungworms (Angiostrongylus cantonensis). The mean age of NAS cases was 21.5 years; mostly males (P = 0.039, X²) from Hawaii (n = 34, P = 0.039, X²).
- Other NAS cases were reported from LA & IL (n = 4).
- There were no deaths from NAS.
- Most males consumed either raw snails or frogs on dunes (P = 0.003, X²).

Pathologic stage (below): L3 larvae migrate to brain (visceral larva migrans) causing meningoencephalitis.

Results: Plant Poisonings

- 6 cases of plant poisonings were reported in 5 males with mean age 26.4 years & 1 female (age 14).
- Plant poisonings caused more fatalities than parasitic infections, Paragonimus westermani, when intoxicated on paddling/float trips (P = 0.028, Χ²).
- Poison hemlock (L)
- 2 fatalities followed consumption of poison hemlock (Conium maculatum). Water hemlock (R)
- 4 plant poisonings with 3 fatalities followed consumption of water hemlock (Cicuta maculata).
- Look Alike Plants:
  - Water hemlock (L) or wild ginseng (red berries) (R).
  - How can one always recognize the hemlocks? Look at the growing sites & the stems. Poison hemlock is high & dry & has purple spots on stems (L). Water hemlock is low & wet & has long-segmented, hollow stems without red spots (R).

Life Cycle

Paragonimiasis

- P westermani is the most common cause of paragonimiasis in Asia, & most immunodiagnostic tests for all cases continue to rely on cross-reactive antibodies to P. westermani.
- The only North American species of Paragonimus capable of causing lung infections in animals & man is P kellicotti.
- All patients with diagnostic laboratory-confirmed cases should be treated to avoid complications of extra-pulmonary disease in the brain & other ectopic sites with oral praziquantel, 75 mg/kg/day for 2-3 days.
- Repeated courses of praziquantel may be indicated in cases of recurrent or inadequately treated pulmonary disease & in cases of cerebral & ocular paragonimiasis.

Life cycle (below)

Conclusions & Recommendations

- Risk factors for infectious diseases from Survivor copycat behaviors included male gender & consumption of raw animals while intoxicated outdoors.
- Risk factors for plant poisonings from Survivor copycat behaviors included male gender & misidentification of poisonous plants as non-poisonous & edible.
- Recommended preventive interventions included proper preparation of self-harvested natural foods, wilderness survival training, plant identification training, & alcohol avoidance.