

NAMA Toxicology Committee Report for 2006: Recent Mushroom Poisonings in North America

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THIS YEAR WAS distinguished by a record number of reported poisonings by "Death Cap" and "Destroying Angel" mushrooms including *Amanita phalloides*, *Amanita ocreata*, *Amanita bisporigera* and/or *Amanita virosa* and possibly *Amanita verna*. Of the total of 132 people reported poisoned by mushrooms, 71 or 58% were poisoned by one of the deadly Amanitas in 16 separate incidents. There was a report of one death in Canada that occurred in 2003. For the United States 11 reports of deadly *Amanita* ingestion involved 44 or 45 people poisoned and four deaths (with six of these people poisoned Jan 1, 2007, resulting in one death and one death that may have been in 2005 and not 2006). The major tragedies in the reports came from Mexico, where there were reports of 16 people with eight (or nine) deaths that occurred in 2005 in at least four incidents and ten people with ten deaths in 2006 in one incident. Counting only the cases that actually occurred in 2006, we still have 48 people poisoned in one year by deadly *Amanita* species that contain amanitoxins. Over the previous 30 years, we had only received reports of a total of 126 people poisoned by these mushrooms, or an average of about four people poisoned per year.

There were nine cases that involved whole families or extended families—five large cases in Mexico, one large case involving Mexican immigrants in California, one large case involving Hmong immigrants in Minnesota, a huge case involving others of Asian ancestry in New Jersey, and one large case involving unidentified individuals in California. In most of these cases, the meal contained at least three different mushroom species, and it is difficult to point to what species the collector thought that he/she had collected. In two cases, each involving one person, the individual put his story on the Web. In one case the person thought he had picked Inky Caps and

wondered why on cooking they did not give off black juice—but ate the mushrooms anyway. He did not look in a book until the next day when he complained of feeling ill and friends warned him that *he should not have eaten an all-white mushroom*. He had eaten three and survived after a few weeks of pain and with his own liver, which should largely recover. In the other story on the Web, the man ate the mushrooms because he thought they looked like something he had eaten before but he did not look in Arora to try to do an ID until after he began to feel sick. He wound up with five months of pain, a new liver, and over \$800,000 in medical bills—and though he has no insurance, he is thrilled to be alive.

The most striking feature of these poisonings is the difference in outcome between Mexico and the rest of North America. While there is no antidote to poisoning by "Death Caps" and "Destroying Angels," with prompt medical care the survival rate is 90% or greater, but with little or no medical care the survival rate is 50% or less. Poisoning by these mushrooms occurs in two phases. The first phase is incorrectly assumed by some to be due to phallotoxins (the specific cause is unknown). This phase is characterized by nausea and diarrhea starting 6–24 (typically 12) hours after ingestion of the mushroom. This is usually followed by a period of apparent recovery. In the past some hospitals would unfortunately discharge the patient at this point. However, by day two there is typically evidence of liver damage due to amanitins, so asking for and getting blood tests for liver function is critical (in the now rare instances where the hospital physicians have not already recognized that). Treatment involves repeated doses of activated charcoal to remove any traces of mushroom that may remain in the system, IV fluid replacement, massive doses of Penicillin G (for patients who are not allergic to

it), and treatment with IV and/or oral N-acetylcysteine, a drug used to treat Tylenol overdoses. Both the Penicillin G and the N-acetylcysteine probably help the liver manage the damaging effects of the amanitins. In several of the U.S. cases, patients also received oral Silymarin capsules (milk thistle extract), and in one case experimental injectable Silymarin (Legalon[®]) was donated and flown in from Europe. Silymarin is used as a liver tonic in European folk medicine and has been used in Europe to treat cirrhosis of the liver. Legalon[®] is used in 13 European countries where it is considered to be the only effective therapy for combating amatoxin poisoning. The effects were dramatic when it was used this January in California. On four patients with LFTs in excess of 10,000 (up to 18,000) and prothrombin times and thromboplastin times (clotting factors) so high that one would expect on average 84% mortality (my conclusions from the data) all four patients showed dramatic improvement in liver function after injection of Legalon[®] (Tod Mitchell, MD, personal communication). All soon recovered liver function, though the most elderly patient, an 83-year-old, succumbed to kidney failure. There is no way that there will ever be a clinical trial to prove that Silymarin helps in these cases, but there is also no evidence to suggest that it should not be used. Indeed, this one dramatic case leads me to conclude that we should do everything we can to support making injectable Silymarin available for experimental use in these relatively rare poisonings. Silymarin has been experimentally tested in dogs, and it is highly effective in treating dogs poisoned by deadly *Amanita* species.

In one other poisoning involving deadly amanitins, a Canadian woman survived a 2005 ingestion of *Lepiota josserandii*. There are few details of her treatment other than the fact that she was hospitalized for several days and received dialysis.

The other poisonings reported in this past year are typical of an average year. *Chlorophyllum molybdites* did not retain its usual first place as a mushroom-poisoning agent. Morels poisoned the usual number of people who have eaten them before and then became sensitive from eating them one too many times. *Amanita muscaria* and *Amanita pantherina* poisoned the usual number

of people and dogs, and the usual number of people mistook *Amanita muscaria* buttons for puffballs. One couple wondered why the inside of the puffball had "fins" (the developing gills of the *Amanita*) and one woman should have wondered why there was a yellow band of tissue near the outermost layer of the puffball (the developing cap surface of the *Amanita*). One person started itching and then suffered paranoia and confusion just from carrying three specimens of *Amanita muscaria* in his hands. In three separate incidents, young men had purchased *Amanita muscaria* over the Internet as a medicinal—in one case to relieve back pain.

A very interesting case involved a Washington man who carried a large *Sparassis crispa* for two miles in his bare arms. He broke out in hives all over his body and suffered for four days—and never even took a nibble of the mushroom. Another interesting case of hives and an edible mushroom involved a Colorado man who sautéed and ate Chanterelles that he had previously frozen raw and uncleared. He was covered head to toe in a red rash the morning after his meal.

The only animals reported poisoned were dogs. Of 19 dogs poisoned, four are known to have died, and one additional dog was in liver failure at the last report received. One dog death was due to an unidentified *Amanita* species, and the other deaths were due to unknown mushrooms. In two cases members of the Toxicology Committee received inquiries as to how owners could keep their dogs from eating mushrooms. I have always said that the only choices were to keep their dogs inside or to totally pave their yard so no mushroom could grow. Marilyn Shaw has a better solution. She suggests muzzling mushroom-eating dogs when they are outside. My favorite dog case involved a Golden Retriever in Vermont—every time the owner let the dog out and certain mushrooms were present, the dog would smell the mushrooms and gobble them down in a flash—followed every time by profuse salivation, lethargy, staggering and apparent hallucinations.

Table 1. Principal Poisonous Mushrooms in 2006

Species	# Cases	% Cases	# People	% People	# Dogs	% Dogs
<i>A. muscaria</i> or <i>A. pantherina</i>	14	16.7%	13	10.0%	2	10%
<i>Chlorophyllum molybdites</i>	12	14.3%	11	8.3%	2	10%
<i>Amanita bisporigera/virosa/verna</i>	12	14.3%	58	43.9%	-	-
<i>Inocybe</i> sp.	4	4.8%	1	0.8%	3	16%
<i>Amanita</i> sp. "Destroying Angel" type	3	3.6%	1	0.8%	2	10%
<i>Amanita phalloides</i>	2	2.3%	7	5.3%	-	-
<i>Amanita ocreata</i>	1	1.2%	5	3.8%	-	-

Table 2. Age Distribution of Human Poisonings in 2006

<5 years old	8	6.1%
6–14 years old	10	7.6%
15–25 years old	5	3.8% ¹
26–45 years old	14	10.6%
46–65 years old	15	11.4%
>65 years old	5	3.8%
Adult unknown age	57	43.0%

¹ Many of the individuals in the 15–25 year age class were experimenting with hallucinogenic mushrooms.

Table 3. Summary of the Reports by Species: Ingestion by Humans of Deadly Amanita Species

Species	When/ Where	ID ¹ / Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Amanita?</i>	2003 ON	P/ ?	Female 62	?	DEATH from mushroom poisoning.	No other information available
<i>Amanita bisporigera</i>	7/18/06 NY	Good/ cook	Male adult	~11	Queasy, then explosive vomit, diarrhea, waited 4-5 hr then hospital, elevated liver functions, prepared for transplant but not needed.	Consumed 3 mistaken for Inky Caps! Tasted bland. Charcoal, IV fluids, massive penicillin, CAT scan. Recovered by day 7.
<i>Amanita bisporigera?</i>	2006 NY	P/ ?	2 adults	?	1 DIED while awaiting a liver. 1 DIED after refusing a transplant.	Two separate incidents, one possibly in 2005. No details available.
<i>Amanita bisporigera or virosa or verna</i>	7/05 Chiapas Mexico	Sp/ cook	At least 16 people	?	Of at least 16 individuals poisoned, 8 DIED . No details or ages available.	At least 4 separate poisonings in 4 Zapatista communities.
<i>Amanita bisporigera or virosa or verna</i>	7/30/06 Chiapas Mexico	Sp/	4 adults, 6 kids 3-12	?	10 members of 2 related families were sickened. All 10 DIED .	The mushrooms were purchased in a market—mushrooms used for protein
<i>Amanita bisporigera or virosa or verna</i>	8/27/06 WI	Good/ cook	Male 46+1 other?	7	Diarrhea, saliva, cramps, sweating, vomit, nausea, headache. No elevation of serum liver enzymes, no other sign of hepatotoxicity.	Two 3.5" caps consumed. Antiemetics, IV fluids, activated charcoal by tube, hemoperfusion, IV penicillin, IV and oral N-acetylcysteine
<i>Amanita bisporigera or virosa or verna</i>	9/9/06 MN	Good/ cook	5 adults and 2 kids 5 & 10	Varied	Initial severe GI symptoms: abdominal pain, nausea, vomiting, diarrhea. Adult, 2 kids in intensive care; 10-year-old girl DIED day 6 presume liver failure. Others released on or before day 5.	Served in soup by extended Hmong family. Monitor fluid and electrolytes; doses activated charcoal, N-acetylcysteine, Penicillin G, oral Silymarin, IV Cimetidine
<i>Amanita bisporigera</i>	7/21/06 PM	Good/ ?	Male 44	?	Hospitalized. Fate unknown.	No information available due to privacy laws.
<i>Amanita ocreata</i>	3/06	Good/	5	?	3 sent in for liver transplant, 2 of those later released. Fate of 5th person unknown.	Details very sketchy due to privacy regulations.

1 G = confirmed, P = possible, Sp = confident of the genus, U = Unknown, VL = very likely

Table 3, continued

Species	When/ Where	ID ¹ Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Amanita phalloides</i> , or possibly <i>ocreata</i>	1/01/07 CA	Sp/ cook	6 people 17 to 83	?	Apparent recovery 2nd day, LFTs normal, but jumped 6 hr later and doubled every 6 hours, nausea, vomit. Man 29 was prepared for liver transplant, but recovered. Woman 83 recovered, ILFTs but DIED of kidney failure. All others recovered.	Consumed <i>Amanita phalloides</i> (or <i>ocreata</i>) + 4 edible species in tacos. Silymarin tablets then injectable (Legalon®), N-acetyl cysteine, penicillin, activated charcoal. Man 29 and woman 83 first in America to get IV Silymarin.
<i>Amanita phalloides</i>	9/8/06 CA	Good/ cook	Male adult	?	30 delirious hrs in hospital given charcoal, IV fluids, liver transplant day 4 or 5.	Did not do ID until sick day after meal. No insurance. Bills over \$800,000.
<i>Amanita virosa</i>	5/15/06 NJ	Good/ cook	20 people	17	Diarrhea, vomiting. Blood work OK. Oldest (65) had minor elevation of her liver enzymes. All fine by day 4.	20 shared a soup/three varieties mushrooms. Four hospitalized. IV fluids, milk thistle, drained bile duct?

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Table 4. Summary of the Reports by Species: Ingestion by Humans – Other Species

Species	When/ Where	ID¹/ Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Agaricus xanthodermus?</i>	7/8/06 CO	P/ raw	Male 66 Female 56	1.5	Nausea, vomiting, diarrhea, abdominal cramping	Had tried to identify 5-6" mushroom using <i>Audubon Society Field Guide</i>
<i>Agaricus</i> (store-bought)	4/3/06 CA	Good/ ?	Female >60	Several hrs	Severe nausea, copious watery diarrhea, weak	Consumed mushrooms that were well past "eat by" date
<i>Amanita muscaria</i>	2/12/06 MI	Good/ raw	Male 19	0.25	Hallucin, sweat, vomit, drowsy, bradycardia, rigidity, agitated, coma, hypotension, resp. depression	Recreational ingestion of 25 g Internet. Treat: Atropine, Diazepam, Intubation, O ₂
<i>Amanita muscaria</i>	4/17/06 MI	Good/ raw	Male <25	?	Classic signs and symptoms	"Grade A Latvian" from Gaia's delight – offered as medicinal to treat pain
<i>Amanita muscaria</i>	10/02 ?	Good/ rW	?	0.3	Felt elevated, vibrant then deep sleep, then aggressive. 48 hours later lower back (kidney pain) – lasting 2 yrs	Anonymous contact by scared person associating long list of now chronic problems with the ingestion
<i>Amanita muscaria</i>	4/12/06 ID	Good/ raw	Male 26	1	Intoxication, nausea, vomit, tremors, incoordination	Purchased dried "medicinal mushrooms" from Internet for back pain
<i>Amanita muscaria</i>	8/6/06 CO	Good/ touch	Male 20	0.4	Itching, then paranoid, afraid, confused, irritable	Carried three specimens, did not consume them
<i>Amanita muscaria</i>	8/14/06 CO	Good/ raw	Male 27	6	Diarrhea and nausea, self-induced vomiting, anxious, asking if he would die	Consumed 3 bites from a dried specimen and 1 bite from fresh one to get high
<i>Amanita muscaria</i> var. <i>formosa</i>	6/24/06 ID	Good/ cook	Female 76	1.5	Nausea, vision "woozy," dizzy & unsteady.	Mistaken for puffballs. Observed at hospital, then released
<i>Amanita muscaria</i> var. <i>formosa</i>	7/2/06 MT	Good/ cook	Male & female adult	0.5	Male vomited 2-3x, female continuously for 0.5 hr. Later recalled metallic taste in mouth, extremely lethargic, dizzy, problems walking, couldn't see well	Mistaken for puffball—best one they ever tasted. Called hospital but fell asleep with phone in hands—awakened by hospital callback 3 hr later. Temporary amnesia
<i>Amanita muscaria</i> var. <i>formosa</i>	9?/2006 PA	Good/ cook	Male adult	?	Upset stomach, blurred vision, violent. Spent 1 week in hospital	Thought he was picking <i>Agaricus arvensis</i> . Given unspecified heart medication

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Table 4. Continued

Species	When/ Where	ID¹ Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Amanita pantherina</i>	5/3/06 WA	Good/ cook	2 males 39, one female 53	1	Males unresponsive and not breathing – both intubated O ₂ for 12–14 hrs. Female breathing but dis-oriented, involuntary motions	Mistaken for Shiitake mushrooms. Thought they were dying, lost sense of time,
<i>Amanita pantherina</i>	5/16/06 WA	Good/ raw	Teenager	?	Belligerent plus usual symptoms	Consumed with alcohol to get high
<i>Amanita pantherina</i>	5/15/06 WA	Good/ cook	Male 53 wife 52	1 & 1.5	Male: nausea and vomit, few CNS symptoms. Female: cramping and muscle spasms moving head to toe	Both given activated charcoal. Female intubated and lavaged, discharged after 2 days
<i>Armillaria tabescens</i>	10/2/06 NJ	Good/ cook	Male adult	5	Diarrhea, vomiting, sore stomach, bad taste in throat	Consumed ~ 15 caps with one beer. No treatment
<i>Cantharellus cibarius</i>	12/10/06 CO	Good/ cook	Male adult	~ 6	Itching skin became almost unbearable. Covered head to toe in hives in morning	Gathered Chanterelles in August and froze them uncleaved. Sautéed.
<i>Chlorophyllum molybdites</i>	6/30/06 CO	Good/ raw	Female 6	1	Vomit 10–15x, greenish diarrhea	Consumed 2–3 bites. Given anti-nausea meds
<i>Chlorophyllum molybdites</i>	7/26/06 HI	Good/ raw	Male 2	-	No symptoms	Consumed 2 bites
<i>Chlorophyllum molybdites</i>	8/20/06 KS	Good/ raw	Male 2	-	No symptoms	Child only licked and mouthed mushroom
<i>Chlorophyllum molybdites</i>	8/30/06 KS	Good/ raw	Male 4	2	Vomiting, low fever, racing heart	Ate 2" cap, given IV fluids, Phenegran
<i>Chlorophyllum molybdites</i>	8/20/06 KS	Good/ raw	Male 9	2	Vomiting, fatigue, weakness, diarrhea 2nd day	Ate "considerable quantity" given 2 antinausea meds
<i>Chlorophyllum molybdites</i>	9/9/06 CO	Good/ raw	Female 4	2	Vomited	Autistic girl found mouthing mushroom—none consumed
<i>Chlorophyllum molybdites</i>	9/23/06 IN	Good/ cook	Male 54	2	Saliva, vomit, loss appetite, discomfort, prostration, light sensitive	Consumed one 4" cap. Symptoms subsided after several hrs
<i>Chlorophyllum molybdites</i>	9/24/06 TX	VL/ ?	Male adult	2.5	Disoriented, cold repeat vomit, diarrhea	Consumed 1 cap as a test

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Table 4. Continued

Species	When/ Where	ID¹ Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Chlorophyllum molybdites</i>	7/2006 CA	Good/ raw	Male adult	?	Cramps	Hospitalized for observation. Ate part of cap
<i>Chlorophyllum molybdites</i>	2005? QC	Good/ raw	Couple	2.5	Vomiting, diarrhea,	Picked mushroom in indoor hotel flower bed with potting soil from CA
<i>Entoloma</i> sp.	10/2005 QC	Sp/ cook	Female 68	1	Intestinal cramps	Observed overnight. Vital functions normal
<i>Gymnopilus spectabilis?</i>	10/2006 PA	P/ raw	Female adult	?	Woman hit several cars while driving. Mushrooms found on seat beside her	I identified a <i>Conocybe</i> ?, a <i>Gymnopilus spectabilis</i> ?, & unknown from pictures
<i>Gyromitra esculenta</i>	7/25/05 MI	Good/ cook	Female 5	Sevrl hrs	2 days nausea and vomiting, cramping abdomen, loose stools, racing heart	Rest of family ate meal with- out ill effects. Treatment unknown
<i>Gyromitra esculenta</i>	5/19/98 BC	Good/ raw	Female 49	2	Chills, vomiting, nausea, intense ab- dominal pain, fatigue, jaundice, elevated liver function tests	Eaten species before but cooked. Treated with IV saline + KCl, Demerol, dimenhydrinate, pyridoxineBC raw 49
<i>Inocybe geophylla</i>	~9/5/06 CA	Good/ raw	Male 6	~14	Vomited then had a rash	Consumed mushroom at a school playground
<i>Leccinum</i> sp. <i>insigne</i> ?	8/3/06 CO	Sp/ raw	Male adult	1	No vomit but diarrhea for 24 hours	Male ate some raw. Female ate cooked and was not ill.
<i>Leccinum</i> sp.	8/13/06 CO	Sp/ raw	Male 34	1.5	Vomit 6–7x, nau- seated–6 hrs	Consumed 1" square piece to "see if he would get sick"
<i>Lepiota josserandii</i>	10/2005 QC	Good/ ?	Female 65	9	Vomiting and profuse diarrhea, painful cramps lower limbs, metabolic acidosis, slightly elevated liver function tests. Given dialysis.	Consumed 6 mushrooms from lawn. LFTs peaked at 48 hrs, normalized after 3rd day. Sp. north due to global warm?
<i>Leucoagaricus leucothites</i>	9/2005 QC	Good/ cook	Female 57	4	Headache, nausea, vomiting	Observed for 24 hours at hospital
<i>Morchella</i> sp.	5/2006 ?	Good/ cook	Male adult	?	Becomes violently ill if he eats just one— family fine	Ate lots in 2005 with no ill effect. This year on Lipitor
<i>Morchella</i> sp. (Yellow Morels)	5/5/06 MI	Good/ cook	Male 36	5	Diarrhea, cramps, sweating, spasm, vomit, nausea	Had 1 beer. Previously eaten 30 years with no ill effect
<i>Morchella</i> sp.	2005 & 2006?	Good/ cook	Male 42	?	2005—rash down left arm. 2006— rash armpits, back of legs, crotch area	Had eaten morels as a kid without trouble. Got a shot of cortisone

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Table 4. Continued

Species	When/ Where	ID¹ Prep	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
<i>Morchella</i> sp. (black & gray)	8/29/06 ID	Good/ cook	Female 46	5	Vomiting. On 1st occa- sion 2 glasses of wine, no effect previously. Now 2nd batch cooked/ brandy flamed off	Had eaten and dried lots with sensitive to morels.
<i>Psilocybe</i> sp.?	5/27/06	P/ cook	Male adult	<1	High for 5 hours, vivid dreams when he fell asleep	Victim a police officer with spiked home-delivery pizza
<i>Russula</i> (red)	12/5/06 FL	Sp/ cook	Female adult	4	Nausea and diarrhea	Husband had no symptoms. Did ID after getting sick.
<i>Russula</i> (red)	8/13/06 ME	Sp/ smoke	Male 28	< 1	Quickly developed fever of 102, abdomi- nal pain. 2nd day vomiting, diarrhea, bloody stool, headache	Mistaken for <i>Amanita</i> <i>muscaria</i> , which he smokes to get high. In fear that father would find out
<i>Russula</i> (red)	8/29/06 CO	Sp/ boil	Female 65	5–6	Vomiting and diarrhea	Consumed three specimens boiled in salt water & kept submerged 2–3 weeks
<i>Sparassis crispa</i>	10/21/06 WA	Good/ touch	Male adult	3–5 da	Hives all over body lasting 4 days. Has very sensitive skin	Carried mushroom in arms or 2 miles, not eaten. Given Prednisone and antibiotic.
<i>Tylopilus eximus</i>	10/2005 QC	Good/ cook	2 male, 2 female		Diarrhea(1), vomiting (all 4)	Blood tests done
<i>Tylopilus eximus</i>	7/17/06 ME	Good/ raw	Male 43	2–3	Diarrhea, dizzy, cramps, disoriented, vomit, nausea, weak- ness	Consumed with alcohol. Transferred to ICU. Given IV fluids, Fenegren, Demerol
12 different mushrooms	10/3/06 NY	U/ cook	Male 13	12	Diarrhea, dizzy, cramps, sweating, spasm, vomit, drowsy, nausea, weakness, headache	Boy scout learning about mushrooms with mother's encouragement. Given charcoal drink, IV fluids.
Unidentified bolete	7/2005 QC	U/ raw	2 adult 1 child	4–6	Dizziness, headache, nausea, sweating, vomiting, weak	3 of 5 ill, each ate about 10g or ½ oz
Unidentified mushroom	9/4/06	U/ ?	Male adult	12	Vomiting and bleeding (INR 2.2), liver func- tion tests sl. elevated.	Mushrooms consumed with Southern Comfort. History of alcohol consumption Renal failure

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Table 5. Summary of Reports by Species: Ingestion by Dogs

Species	When/ Where	ID¹	Sex/ Age	Onset (hrs)	Symptoms	Comments & treatment
"Angel of Death"	10/27/06 NC	P	4 dogs		Platelets high and abnormal white cells	1 dog on IV fluids. No other details
<i>Amanita</i> sp	7/4/06 SC	P	-	-	Nausea, dehydration, vomit, BUN &/or Creatin elevation, acute renal failure, DIED 4th day	Found piece of white stipe. Extensive treatment: IV fluids, antibiotics, Reglan, pepsid, cefazolin, etc.
<i>Amanita muscaria</i>	9/7/06 C)	Good	-	-	Dog ate a lot previously and was sick. How to prevent?	Suggest muzzle for Golden Retriever when outside
<i>Amanita pantherina</i>	3/4/06 WA	Good	-	-	Dog at one time almost stopped breathing	Recovered nicely at vet's
<i>Chlorophyllum molybdites</i>	9/1/06 KS	Good	? 8	1-3	Vomiting, liver function ALT slightly elevated	Dog consumed 3-4 buttons. IV fluids, charcoal
<i>Chlorophyllum molybdites</i>	7/8/06 TX	Good	Male 6		Diarrhea, cramps, Weakness	Bland diet and Pepto Bismol®
<i>Inocybe</i>	11/7/06 NY	Sp	Female 8 wks	<0.1	Saliva, vomit, weakness, collapsed, very slow heart,	Dog consumed several pieces. Given IV fluids shock doses & 1 dose IV atropine cardiovascular shock
<i>Inocybe</i>	10/24/06 WA	Sp	? 15 mo	0.4	Vomit, diarrhea, hyper salivation, tremors later lethargic gene-	Anti-vomit meds, charcoal, IV fluids, pepcid, ampicillin then valium. Slow recovery ralized seizure
<i>Inocybe geophylla v. lilacina</i>	9/27/06 ME	Good	Female 12 wks	2	Saliva, cramps, dis- oriented, vomit, nausea, weakness, lacrimation	Treated with charcoal and homeopathics – much better in 1 hour
Unknown	9/15/06 CO	U	-	-	Dog was gagging	Mushroom found in yard with a piece missing
Unknown	9/27/06 IL	U	-	-	Dog DIED	Mushrooms for ID: <i>Coprinus atramentarius</i> , <i>Lepiota naucina</i> , <i>Agaricus</i>