

CATs Helps Frogs By Pinpointing Pesticides

Capping a five-year-long effort, CATs is debuting a database of international research detailing the most recent findings about the effects of pesticide use on amphibians and reptiles. The research comes from all over the world, but particularly includes critical in-the-field studies from California that are meshed with findings from the unique pesticide-use database of the Department of Pesticide Regulation (DPR).

California is one of the "hot spots" in the global decline of amphibian populations, and native aquatic frog and toad species have been disappearing for two decades. Central and southern California felt it first, but the decline of frogs has come north--and pesticide use has increasingly emerged as one of the greatest threats to frog survival.

For example, research by the U.S. Geological Survey since 1997 has revealed dangerous levels of pesticides in both the bodies of frogs and in their aquatic habitat in pristine areas of the Sierra Nevada. Entire populations of native frogs have vanished, and research has pinpointed pesticide sprays that have drifted hundreds of miles from the Central Valley to settle in wilderness areas.

But when CATs asked the DPR to re-evaluate the danger to frogs based on

this research, the agency balked, triggering several years of intense effort by CATs that's led to greater citizen input to DPR's registration process.

CATs was a major player in a suit that won increased protection from pesticides for the red-legged frog--the frog made famous by Mark Twain. Again using the state's pesticide-use database, CATs mapped where frog populations were threatened by the toxic sprays--and identified 66 pesticides that the court later agreed the EPA must study under provisions of the Endangered Species Act.

CATs' database, compiled by a biologist whose frog research has taken him as far afield as West Africa, builds on an earlier one covering literature up to 1998 put together by the Canadian Wildlife Service.

Now CATs has attempted to bring all the updated research into an easily accessible database. We have compiled a list of 225 scientific papers published since 1999 on the effects of pesticides on amphibians, as well as 87 research papers on pesticides' impacts on reptiles. Most have links to summaries or full texts of the papers. Links to lists of books and to sites with related information are also available.



drift

Founded in 1982, Californians for Alternatives to Toxics is a clearinghouse for information and strategic action regarding pesticides and other hazardous chemicals and to promote alternatives to their use. CATs works to bring solutions to toxic conditions occurring in northern California, with actions that benefit people here and around the world.

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"The history of life on Earth has been a history of interaction between living things and their surroundings."

- Rachel Carson



Photo:
CATs member Paul Frey (pictured in his vineyard earlier this year) described to the court how state pesticide programs, like that for the glassy-winged sharpshooter, impact organic farmers.

State Forced To Assess All Its Pesticide Programs

CATs won a precedent-setting victory in state court that's likely to affect all California programs aimed at chemically eradicating a wide range of harmful pests.

In a clearly worded opinion, an appeals court unanimously rejected the state's plan to contain the vine-destroying insect known as the glassy-winged sharpshooter. The decision effectively requires all agencies to

analyze the effects of the pesticides they use in control programs.

The ruling came just as the state Department of Food and Agriculture (DFA) is embarking on a broad Environmental Impact Report (EIR) on control of a spectrum of agricultural pests—everything from beetles to weeds—spreading throughout the state.

The three-judge panel said DFA had failed to fully consider the environmental effects of its glassy-winged sharpshooter program, and that "this error infected the analysis of the impact from exposure to pesticides on people in nonagricultural areas."

The court singled out people "susceptible to health complications" as well as agricultural and nursery workers—and referred specifically to spraying in or near schools, parks, hospitals, nursing homes, organic farms and even wildlife.

CATs' central argument—that DFA had improperly deferred to the pesticide-registration process rather than analyzing the actual consequences of using pesticides against the sharpshooter—was upheld by the court.

What this means is that DFA must rewrite its EIR, and this time must include assessments of area-wide pesticide use so that the potential for cumulative impacts is taken into account. If significant effects are

found in the new EIR analysis, the state will be required to change its control methods to avoid harm.

The decision was a defeat for the powerful wine industry, which pressured agricultural agencies to begin intense emergency spraying when the sharpshooter was discovered in 2000.

Roadsides and residential areas were targeted along with plant nurseries and orchards. But now, five years after neighborhoods and malls in several towns have been drenched with powerful chemicals normally used in intensive agriculture, the DFA and the public remain in the dark about possible harmful effects.

The court decision also has implications for other state agencies. The California Department of Forestry, for example, is trying to revive its plan to "manage" vegetation to reduce fire risk around the state—a plan previously defeated in court by CATs and the Environmental Protection Information Center because of a faulty EIR.

CATs was joined in its sharpshooter suit by the Napa County citizens group People Opposed to Insecticide Spraying On Neighborhoods and the national organization Public Employees for Environmental Responsibility.



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Return Service Requested



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Humboldt's Dubious Distinction

A new report from CATs shows tons more herbicides were sprayed on Humboldt County forests in 2004 than in any other California county, according to data from the Department of Pesticide Regulation.

More than 29 tons of potent pesticide chemicals coated the forests, the report reveals. That's nearly six tons more than any other county.

Unlike other counties, where public forests are also sprayed, only privately owned timberlands get doused in Humboldt.

Although the total might seem staggering, it actually was less than the five-year average chalked up by Humboldt timber companies: almost 55,000 pounds annually.

Green Diamond, formerly known as Simpson, applied the most—an average of 38,758 pounds a year. Maxxam's Pacific Lumber came in second, at an average of 16,507 pounds annually, followed by Sierra Pacific and Barnum with an average of 2,774 pounds and 2,564 pounds per year.

That's tons of toxics, with names like triclopyr, atrazine, 2,4-D, glyphosate and, more recently, imazapyr.

They were applied to watersheds all over the county. Getting the most were Redwood Creek, Maple Creek, Little River, Mad River, Freshwater Creek and Eel River.

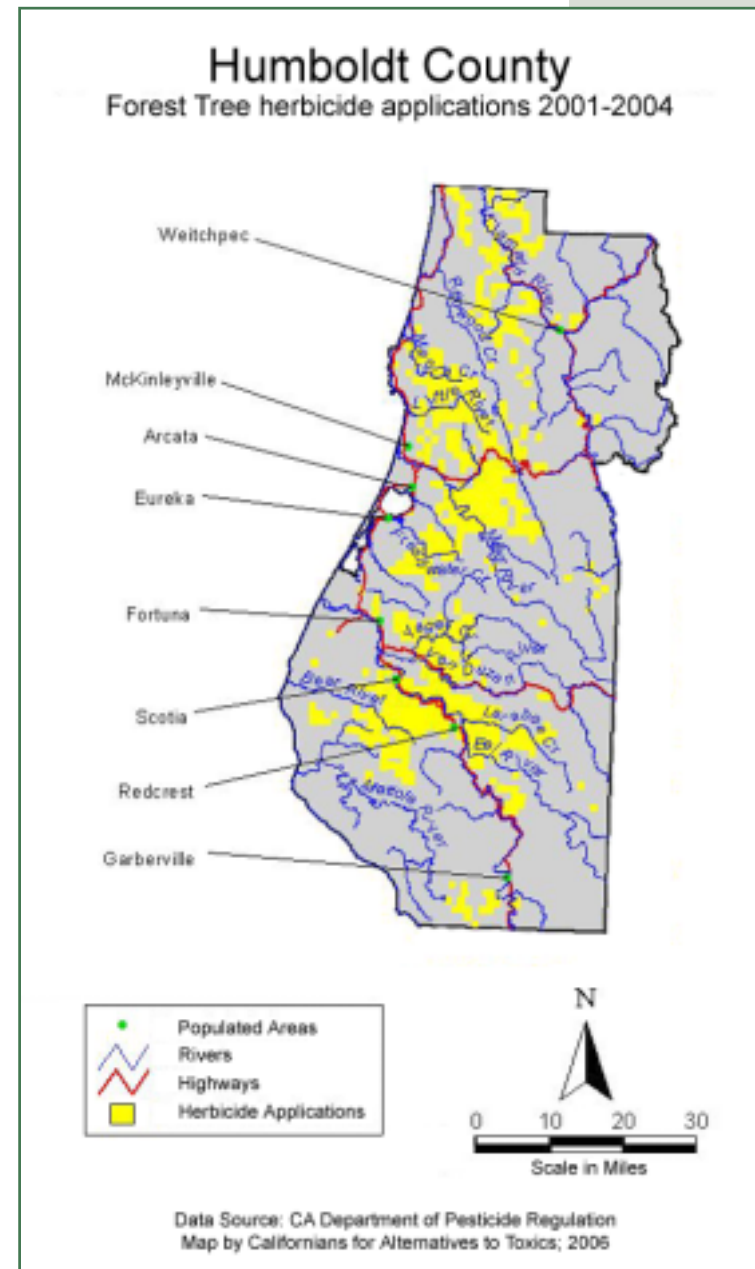
In human terms, that means communities such as Fieldbrook, Blue Lake, Kneeland, Carlotta, Scotia and Redcrest were close to the spray sites—especially in the spring and fall, when most of the tonnage is unleashed. And those at greatest risk from exposure include the chemically sensitive, pregnant women and their fetuses, infants, the elderly, native plant gatherers—and those workers applying the poisons themselves.

Humans aren't the only ones suffering from often-wanton use of chemical poisons. Recent research on amphibian populations, which are in decline worldwide, has shown that they are vulnerable to atrazine, triclopyr and glyphosate products.

Similarly, some of the most used herbicides—triclopyr, 2-4D and glyphosate products—are toxic to salmon and other fish, even though their local populations have been drastically reduced from historic levels.

As if those pernicious effects were not enough, studies show that herbicides also may be creating conditions more hospitable to the invasive species that are crowding out native plants and animals.

"Humboldt County Tops in Forest Timber Land Spraying" can be read or downloaded from the CATs website or may be obtained by contacting the CATs office.



Top 5 Forestry Herbicides, Humboldt County 2001-05

	2001	2002	2003	2004	2005
Triclopyr	28,019	14,761	17,799	15,806	9,406
2,4-D	4,157	5,567	7,190	7,396	5,372
Glyphosate	5,821	6,054	6,281	6,291	3,343
Atrazine	6,650	23,668	11,034	10,267	3,855
Imazapyr	738	858	2,484	4,642	9,846
Total:	45,385	50,908	44,788	44,402	31,822

Source: 2005, Humboldt Co Agricultural Commissioner; 2001-04, CA Dept of Pesticide Regulation

About Glyphosate

When Monsanto's patent for glyphosate expired in 2000, many companies entered the market as formulators of herbicides containing the chemical. Today, 206 glyphosate products are registered in California, some as well-known as "Roundup." Other products are sold in generic packaging in the garden section of many stores.

Widely considered the #1 most often used herbicide worldwide, glyphosate is also first in California, where agricultural and commercial uses were reported to be 6,364,365 pounds of the active ingredient in 2004.

References

For a full list of citations to the Toxicological Profile for Glyphosate, see: www.alternatives2toxics.org

Toxicological Profile by Center for Ethics and Toxics (CETOS) with Californians for Alternatives to Toxics.

Toxicological Profile for Glyphosate

Glyphosate is the active ingredient of the herbicide best known commercially as "Roundup." It is a non-selective, systemic herbicide for controlling weeds in agriculture, forestry, rights-of-way and aquatic systems. Glyphosate disrupts plant growth and eventually causes death by inhibiting synthesis of amino acids. Isopropylamine salt is the most frequently used form of glyphosate.

Human Health Risk Summary

Acute Effects: Some formulations of glyphosate cause extreme irritation of the skin and eyes, such as blurred vision, burning eyes, rashes and skin blisters. Other symptoms reported following acute exposures include: nausea, sore throat, dizziness, gastrointestinal and respiratory tract injuries.

Chronic Effects: Carcinogenicity: Though evidence that glyphosate causes cancer is yet to be established, several animal and human population studies have indicated that it may increase the risk of non-Hodgkin's lymphoma, multiple myeloma, pancreatic, thyroid and testicular cancers.

Reproductive & Developmental Toxicity: Glyphosate exposure has been associated with several manifestations of reproductive and developmental impairment. In animal studies, high dose or prolonged exposures have resulted in skeletal malformations, disrupted organ development, and reduced sperm volume and quality. In human population studies, exposure to glyphosate has been connected to an increased rate of miscarriage, reduction in sex hormone production, and disruptions to endocrine system development.

Mutagenicity: Several studies on both animals and humans have suggested that exposure to glyphosate can cause chromosomal aberrations, DNA breaks, and other genetic mutations.

Ecological Hazard Summary

Environmental Fate: Glyphosate has frequently been detected in surface water nation-wide. It tends to bond strongly to soil particles and therefore may be displaced to surface water from movement of soil by wind, erosion, or storm runoff. Drift following aerial applications also contributes to the presence of glyphosate in water.

Glyphosate is moderately to highly persistent, with half remaining toxic in soil from 60 days to six months or more, de-

pending on soil conditions. In aquatic environments, half may remain toxic for several weeks to several months.

Risk to Non-Target Flora & Fauna: Because of drift and offsite movement from wind and rain, glyphosate poses a considerable risk to non-target plant and animal species. A significant amount of glyphosate spray applications drift off-site (from 14% to 78%), affecting plants 130 feet away, and residues have been detected up to 1,300 feet downwind.

Glyphosate has been shown to disrupt the immune systems and cause genetic abnormalities in fish. Similarly, it causes genetic, developmental and reproductive mutations in amphibians.

The balance of soil organisms is disrupted by glyphosate, which leaches from the roots of sprayed plants into the surrounding soil. Several studies have indicated that pathogenic fungi and other crop pests increase in numbers or have less competition when glyphosate is present in soil.

Toxicity of Other Ingredients

Commercial products such as Roundup are composed of the active ingredient (approximately 40% of the solution) and other ingredients that improve its effectiveness. These compounds exhibit toxicity at much higher levels than glyphosate alone. One such chemical, polyethoxylated tallowamine (POEA), is three times as acutely toxic to humans as glyphosate alone.

A product commonly mixed with glyphosate formulations to improve performance in the environment was found to be 100 times more toxic to aquatic invertebrates. Other added ingredients have been shown to damage cellular DNA, cause cancer or birth defects, and disrupt reproductive function in both humans and animals.

Summary

Glyphosate and commercially available products containing this compound are of particular concern to human health and the environment, due to: 1) some evidence of carcinogenicity, reproductive/developmental toxicity, endocrine system and genetic toxicity to humans; 2) potential adverse effects to non-target plant and animal species due to overspray, drift, and displacement; and 3) the potentially severe impact of many of its additives such as POEA, which have been identified as extremely hazardous to both humans and animals.

Toxics Close to Home

CATS raised protection of air and water to a new level in its Humboldt Bay area home base by filing two lawsuits in federal court against local polluters.

Significant and on-going violations of the federal air quality permit regulating emissions of the pulp mill owned by Evergreen Pulp, Inc. — located across Humboldt Bay from CATs' office in Eureka —



prompted one CATs' lawsuit. The pulp mill's owners had convinced regional air quality regulators to let Evergreen off the hook for its local air quality permit.

In documents filed with the North Coast Unified Air Quality Management, Evergreen admitted to exceeding emission limits regularly since purchasing the facility in January 2005.

CATs and co-plaintiff Environmental Protection Information Center joined forces under provisions of the Clean Air Act that allow citizens to file suit when government fails to act.

Citizen suit claims filed under the Clean Water Act brought CATs into federal court with Humboldt Baykeeper, seeking an order to clean up toxic contamination at the old Simpson Plywood mill on Del Norte Street in Eureka.

The groups sued Simpson Timber Company and Preston Properties because dioxin-laden soil is impacting Humboldt Bay and the Eureka Marsh. Former owner Simpson Timber Company had been negotiating with the North Coast Regional Water Quality Control Board for more than fifteen years regarding the pollutants.

Sampling undertaken by the plaintiff groups showed as much as 89,000 parts per trillion of extremely toxic dioxin in mud near the mill. Dioxin is a contaminant of pentachlorophenol once used at the former mill site as a wood preservative.

From the desk of the Director

Why Be a Member?

People often wonder about the perks that come with a CATs membership. They ask if a newsletter subscription is involved, or if we'll help them rid our environment of toxic chemicals.

The answer is YES! It's all available, but the newsletter and information are free for the asking to any who will use it to help create a non-toxic world.

So what's special about being a member? The best way I can describe it is in how much louder and bolder CATs' voice becomes when you add yours to the chorus. Whether it's when we advocate before a government agency, file a lawsuit against an outrageous polluter or bring thousands of people together for the Organic Planet Festival, or even when raising money to pay for this work, what CATs is made of — its members! — counts for everything.

That's why I'm asking you to pull out the gold envelope tucked into this newsletter, fill it out and mail it back ASAP. With that step, you'll add your voice, strength and caring to CATs' efforts to make our world a non-toxic haven for healthy living and a living environment. That's the best perk we have to offer.

Changes

This newsletter marks the last time I'll write for it as CATs' Executive Director. By the end of this year, I'll be morphed to the position of Programs Director, one I currently hold, but minus the responsibilities that come with keeping the doors open, budgets balanced and forms filled.

We still don't know just who will take up the E.D. mantle or how the transition will progress, but the ball is rolling and I'm REALLY looking forward to being 100% focused on our core projects and helping make northern California a center for non-toxic living.

Next year we plan to celebrate CATs' 25th anniversary. It seems a fitting time to make this change!

Please join CATs as we step into the future.



Faces of CATs

From L-R: Organic Planet Festival organizers Michelle Fuller, Karen Sherman, CATs' President Perry Gray-Reneberg, Matt Lang, Serena Stockdale, and Executive Director Patty Clary.

Feds' herbicide treadmill

Both the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) have again gotten hooked on large-scale herbicide projects, an ominous sign for federal public land management strategies.

The USFS has at least 24 projects totaling more than 52,610 acres on the spray schedule in California alone. CATs has filed suit to stop the two largest of these projects, Cottonwood in Tahoe National Forest and Larsen in Stanislaus National Forest. Together they comprise 23,500 acres, almost half of the state total.

The BLM is also fully on the federal agency herbicide bandwagon, proposing to triple annual spray totals, approaching a million acres, in Western states. CATs is vigorously opposing this plan too, which involves 18 herbicides and heavy aerial spraying.

The largest of the new USFS spray proposals includes herbicides, fungicides and rodenticides in the McNally Project on the Sequoia National Forest. Among the more than 8,000 acres proposed for "treatment" to boost post-fire recovery are parts of the Sequoia National Monument.

CATs did persuade Plumas National Forest officials to reduce borax applications in their Empire Project to 21 acres, instead of the originally planned 3,947 acres, after we discovered that more borax was being applied than scientific literature supported.

After CATs found out that large amounts of this sodium compound — which doesn't occur naturally in forests — were being used with little to no environmental analysis, we convinced managers in a few forests to change their application

criteria, resulting in greatly reduced acreage and fewer pounds of borax used.

Invasive weed control on public lands remains a central issue. While both the USFS and BLM prefer to spray herbicides, merely treating the symptoms of the problem, CATs is advocating non-toxic integrated pest management practices, which incorporate prevention, species biology and ecosystem health without introducing toxic chemicals into our public lands.

CATs Corrals Creek Killer

Agencies' Plan Blocked

CATs stopped state and federal agencies from "executing" a creek in a high Sierra wilderness last fall so they could replant a fish popular with anglers.

The stream sterilization plan was withdrawn as a result of the CATs-prompted court decision, which also will affect similar proposals being made for scores of California streams and lakes by the U.S. Forest Service and the state Department of Fish and Game (DFG).

A crew was already on-site and poised to unleash the toxic chemicals when the injunction halted the poisoning of 11 miles of the Silver King Creek and a nearby lake in the Carson-Iceberg Wilderness Area.

DFG initiated the plan to use the lethal aquatic pesticide called rotenone to kill non-native trout, which—ironically enough—the agency had planted originally. The goal now was to restock the stream with native Paiute cutthroat trout, prized by anglers.

CATs argued that because rotenone was not just lethal to fish, other species — including some that are rare or endangered—would be eliminated. The judge agreed and insisted that an environmental analysis was required.

He also blasted the plan for its "stark finality; an execution in a very special place in our treasured mountains."

Rotenone has been used in efforts to eradicate non-native species in other parts of the country, with mixed results. The poisoning of California's Lake Davis has been typical, with chemicals lingering months beyond predictions and fish eradication a failure.

Aquatic ecosystems in the Sierra Nevada provide habitat for species found nowhere else in the world, including certain aquatic invertebrates that are essential for ecosystem health and which provide food for fish, birds, amphibians and mammals.

The Paiute cutthroat trout, one of the rarest trout species in the West, has suffered at the hands of state agencies that have brought competitive, non-native fish into its habitat and now are poisoning watersheds to kill off the introduced invaders.

"For years we've raised the issue that rotenone kills indiscriminately but the Forest Service ignored us," said Nancy Erman, an aquatic invertebrate specialist from the University of California, Davis.

CATs was joined in the lawsuit by Wilderness Watch and two individuals.



It's an Organic Planet!

Come join us Saturday, August 26, to celebrate a world of organic and non-toxic living at the 2nd annual Organic Planet Festival! Building on last year's successful event, CATs has planned a day filled with music, information, food and fun.

We'll present the Eureka Natural Foods World's Largest Organic Salad and commemorate Eureka's 150th birthday with a North Coast Co-op gigantic cake and Humboldt Creamery/Organic Valley ice cream. The Wildberries Marketplace Kids' Village will stage a merry mid-day parade.



Keeping revelers organically fueled will be food from the Beachcomber Cafe, Eel River Organic Beef, The Tofu Shop and Pachanga Mexicana. Beverages will be offered from Santa Cruz Organics, Butte Creek Brewing Company, the vinyards of Coates, Frey and Mendocino Trading Company and more.

There's lots to enjoy, from grooving on a great lineup of roots reggae, funky rock-folk, Afro-beat, steel drum and bluegrass 'n jazz to playing with face paint, crafts, and a petting zoo in the Kids Village. Vendors will be showing and selling the latest organic and non-toxic wares, while community groups will demonstrate what they're doing to improve our world.

Don't miss the CATs Clearinghouse, where festival-goers can sign up to win one of 50 shopping bags filled with samples of organic and non-toxic items.

Our featured speaker, Ann Cooper, will describe how to get wholesome food into school cafeterias, while workshops on eating organically on a budget, green building methods and healthy household cleaning will be complimented by a panel on why being organic is important to our world.

**Help
Wanted: Be
a Volunteer!**
Call 445-5100
ext 212

Festival Schedule

The Organic Planet Festival will be held in Eureka at Halvorsen Park. From Highway 101, take L Street toward Humboldt Bay and follow the signs.

11:00 am - Gates Open; Pan Dulce - *30-piece steel drum calypso community band*. These local favorites have recently released their first CD to much acclaim. [M.S.*]

12:00 noon - Aphrodesia will host two workshops simultaneously: One on African drum and dance by band members recently returned from West Africa where they played the legendary New Africa Shrine in Nigeria; another on biodiesel, featuring Aphrodesia's tourbus. [F.G.]

12:30 pm - **Featured speaker:** School nutrition expert Ann Cooper will talk about "Organic School Lunch Programs." An author and consultant, Chef Ann sits on the USDA National Organic Standards Board and is nutrition director for the Berkeley Unified School District. See www.chefann.com. [M.S.]

1:30 pm - **"Why Be Organic?"** - A four-member panel will discuss the multifaceted nature of organic food production. Organized by the Campus Center for Appropriate Technology (CCAT) from Humboldt State University. [P.T.]

- Serving of the **World's Largest Organic Salad!**

1:45 pm - Clinton Fearon and the Boogie Brown Band - *Jamaican roots reggae*. Fearon is a living legend of roots reggae, performing with some of the biggest names in the genre. [M.S.]

2:45 pm - **"The Non-Toxic Home"** - Louise Jeffery of Humboldt's Integrated Waste Management Program and Angie Wood, Fortuna's Solid Waste Coordinator, will describe options for non-toxic cleaning and maintenance at home. [P.T.]

3:00 pm - **"Recycled Music as Object and Idea"** - Joe Craven's family-oriented workshop. "Music that's informally made and shared is a hallmark of folk music...and leads to the creative life". [F.G.]

- Serving **Organic ice cream and cake** for Eureka's 150th anniversary celebration!

3:30 pm - Raining Jane - *eclectic rock-folk*. An all-women band from L.A. featuring stunning harmonies and occasional surprise instrumentation. They have opened for many nationally known acts. [M.S.]

4:30 pm - **"Safer Building"** - Michelle Miller will talk about choosing alternatives to toxic chemicals in traditional building materials and SaferBuilding™ certification for non-toxic construction. [P.T.]

- Start the **Kids' Parade!**

5:00 pm - Joe Craven Quartet - *bluegrass, world music, jazz and beyond*. A multi-instrumentalist extraordinaire who, with friends, will perform selections from his new album, "Django Latino." [M.S.]

5:15 pm - **"Green Recycled Buildings"** CCAT will discuss materials and design ideas incorporated in their "new" house and Organic Planet Festival host CATs' solar-powered and recycled office. [P.T.]

6:15 pm - **"Organic on a Budget"** - Sean Armstrong, back by popular demand, will demonstrate how to eat organic food while staying within a budget. [P.T.]

- The **Non-toxic and Organic door prize** drawing!

6:45 pm - Aphrodesia - *Super Afro-beat*. From Lagos, Nigeria to the San Francisco Bay Area, these Afro-beat explorers take Fela Kuti's African jazz-funk into the 21st century. [M.S.]

* [key: M.S. = main stage; P.T. = presenter's tent; F.G. = festival grounds]

Presented by Californians for Alternatives to Toxics

CELEBRATING A NATURAL & NON-TOXIC WORLD
SECOND ANNUAL

ORGANIC PLANET FESTIVAL

August 26
11 am - 8 pm

EUREKA CALIFORNIA
150th Anniversary

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Joe Craven Quartet
Raining Jane
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National Expert - Chef Ann Cooper @ 12:30
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