

Krish's Aviary

17971 Sun Knoll Dr.
Yorba Linda, CA 92686

(714) 996-1296

Guaranteed Quality

COCKATIELS

For Sale
babies
yearlings
breeders

Normals, Lutinos,
Pieds, Cinnamons,
Pearls, Splits



SHIPPED ANYWHERE IN
THE UNITED STATES

CALL OR WRITE FOR PRICES
AND AVAILABILITY

Walnut Acres Aviaries

Special Interest Breeding
Grass Parrakeets, and Rosellas
Australian Grass Finches
Birds aviary raised outdoors.

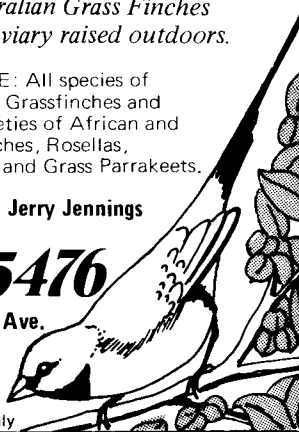
FOR SALE: All species of
Australian Grassfinches and
many varieties of African and
Asian Finches, Rosellas,
Kakarikis, and Grass Parrakeets.

Call or Write: Jerry Jennings
(213)

884-5476

1803 Pontius Ave.
Los Angeles,
CA. 90025

Visitors by
Appointment Only



STOP

THROWING SEED AWAY
USE—**Recycling
Seed
Dispensers**

FIT ALL CAGES

patented *** improved

ONE YEAR GUARANTEE

Large Size (22" x 5") Holds 1½ lbs of seed
Small Size (12" x 5") Holds ¾ lb of seed

Price	Large	Small
Finch/Canary	12.95	10.95
Budgie	12.95	10.95
Lovebird	13.95	11.95
Cockatiel	14.50	12.50

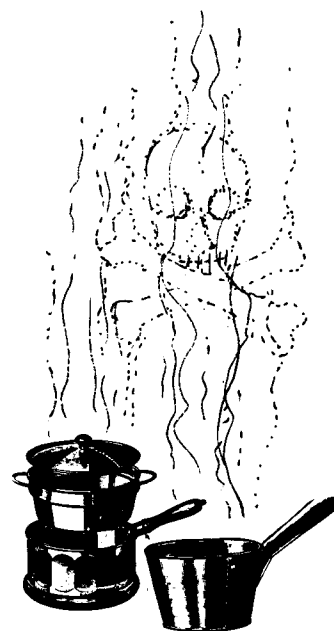
For C.O.D orders call (312) 697-0821,
or send check or money order to:

NATURE-LIFE CO.

R-15, Box 763-L, N. Ft. Myers, FL 33903

Orders sent F.O.B. & C.O.D.

Illinois residents add 5% sales tax.



Teflon® Poisoning

How Dangerous Is Your Cooking To Your Birds?

by Robert D. Kroshefsky, Ph.D.

The chemical compound polytetrafluoroethylene, generically called PTFE but known best in North America under the DuPont brand name of Teflon®, is a polymer of tetrafluoroethylene, a colorless, odorless gas. The polymer was first isolated by a DuPont scientist in 1938 when he cut open a gas cylinder of tetrafluoroethylene that had lost all of its pressure but no weight. The gas had reacted with itself to form a waxy white solid that coated the cylinder walls. Nowadays, PTFE is made commercially under controlled conditions of heat and pressure using reaction promoters known as catalysts. In 1938, the metal cylinder had functioned as a catalyst.

Teflon® is a substance composed entirely of carbon and fluorine atoms. The carbon to fluorine bond is especially strong and the fluorines effectively shield the carbon polymer backbone from chemical attack under normal circumstances. PTFE is noncombustible and resistant to chemicals, weathering and ultraviolet light. It is therefore of great utility in many extreme use applications.

As an organic chemical, however, PTFE has one significant property of interest to us here — it will decompose when exposed to excessive heat. This particular property is a "fact of life" for all organic

polymers whether it is the PTFE on a fry pan, the nylon in clothing, the wood cellulose in a home or the proteins in a hamburger. The source of the polymer — natural or synthetic — is irrelevant. The only considerations that make one more dangerous than another in any situation are temperature and ventilation.

Thermal degradation is of great interest to scientists and a vast body of experimental work has been published on the products of this process and their toxic effects on animals. Much of what I will say comes from an excellent literature review compiled by DuPont¹.

It is known that PTFE begins to decompose in air at about 200°C (400°F) giving off a sublimate or "dust". The principle toxic ingredient given off by PTFE up to 450°C (840°F) is this dust, which partly reacts with atmospheric oxygen to give carbonyl fluoride, a chemical relative of phosgene. If the air is moist, the carbonyl fluoride further reacts to give hydrogen fluoride (an acid) and carbon dioxide.

Exposure of humans to these decomposition products results in a temporary flu-like condition called polymer fume fever. It is very similar to the long known metal fume fever or foundry man's fever. The symptoms usually appear several hours after exposure and subside within 36

to 48 hours even without medical treatment. There seem to be no lasting or cumulative effects. The causative factor is unknown.

Avian species do not fare as well as humans, perhaps due to their unique respiratory system. In one case, an accidentally overheated fry coated with PTFE produced symptoms of polymer fume fever in the owner and killed five cockatiels within 30 minutes of exposure².

As a result of such reports the Haskell Laboratory for Toxicology and Industrial Medicine, a unit of E.I. Dupont, undertook to establish the level of danger that Teflon[®] coated fry pans posed to birds. Their findings were published in 1973 in the scientific literature³. The study was performed on Japanese quail and parakeets (budgerigars) and sought:

"(1) to establish an Approximate Lethal Temperature (ALT) for Japanese quail and parakeets exposed to Teflon[®] finish pyrolysis products for comparison to that for rats under similar laboratory conditions and, (2) to compare the bird toxicity of pyrolysis products from various cooking materials and utensiles."

The experimental approach was to draw off the air above fry pan assemblies at various temperatures and run that air through a chamber containing six birds at a set rate for four hours. The fry pans used were Teflon[®] coated pans, plain aluminum pans and cast iron pans. These were heated without flames either empty or containing 1/4 cup of corn oil 1/8 pound of butter.

The results of experiments with Japanese quail are shown in Table 1. The ALT for empty Teflon[®] pans lies between 315 and 330°C. The narrow temperature difference between no effects and deadly effects is similar to that found for rats⁴. However, in that instance the ALT was about 450°C, over 100°C higher. The aluminum and cast iron pans are innocuous even at high temperatures, as would be expected. Note that the presence of corn oil in either of those two pans can be lethal if a "grease" fire breaks out. Butter, on the other hand, seems to almost be safer in a Teflon[®] coated pan than in an uncoated pan. Experimental analysis would tend to attribute death to the butter and not to any influence from the pan materials.

The experiments with parakeets (budgerigars) were not as extensive due to

AUSTRALIAN FINCHES

By Klaus Immelmann

Highly informative book of international status, a classic devoted to one group of Australian birds. 216 pages, 21 color plates from the paintings of Neville W. Cayley. Regular price: \$21.50.

THIS MONTH'S SPECIAL

WHILE SUPPLY LASTS: \$18.95 postpaid.

We sell at discount prices.

Send \$1.00 (refundable upon purchase) for our 28 page catalog.

Avian Publications
310 Maria Drive, Dept. AFA
Wausau, WI 54401

Silver Flight Bird Diets

Wild Bird Supplies

Cage & Aviary Seed

Nutritional Aids

SEND FOR PRICE LIST

THE BIRD'S NEST

5 Patten Road, Bedford, N.H. 03102

(603) 623-6541

Analysis per 3.5 grams (approximately one teaspoon)

A	600 IU
Carotene	0.365 mg.
Canthaxanthin	1.8 mgs.
D ₃	60 IU
Arginine	32 mgs.
Histidine	13 mgs.
Isoleucine	24 mgs.
Leucine	33 mgs.
Phenylalanine	30 mgs.
Tyrosine	33 mgs.
Methionine	12 mgs.
Cystine	8 mgs.
Threonine	33 mgs.
Tryptophane	9 mgs.
Valine	40 mgs.
Lysine	44 mgs.
Alanine	30 mgs.
Aspartic Acid	50 mgs.
Glutamic Acid	140 mgs.
Glycine	36 mgs.



E	10 IU
K	0.001 mg.
C	6 mgs.
Bioflavonoid Complex	0.85 mg.
Hesperidine Complex	0.735 mg.
Rutin	0.365 mg.
B ₁	0.5 mgs.
B ₂	0.5 mgs.
B ₆	0.5 mgs.
B ₁₂	0.001 mg.
Choline	7.8 mgs.
Inositol	7.8 mgs.

Niacinamide	3.7 mgs.
P.A.B.A.	2 mgs.
Biotin	0.003 mg.
Calcium	170 mgs.
Phosphorus	170 mgs.
Magnesium	7.3 mgs.
Potassium Chloride	39 mgs.
Sodium Chloride	25 mgs.
Manganese	0.069 mg.
Cobalt	Trace
Silicon	Trace
Iron	0.7 mgs.
Copper	0.037 mg.
Iodine	0.008 mg.
Zinc	0.245 mg.
Proline	39 mgs.
Serine	50 mgs.
Pantothenic Acid	2.5 mgs.
Folic Acid	0.122 mg.

THE SECRET IS OUT.

The secret of Avia's "Magic Powers" has been well guarded up to

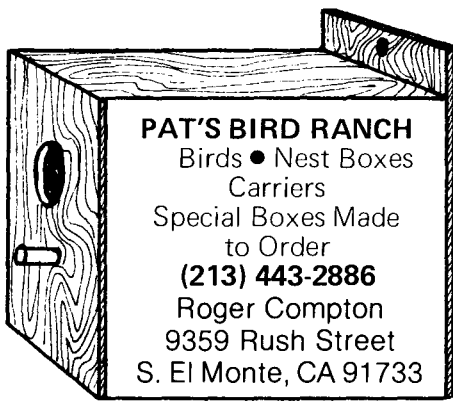
now. Whispered in top aviaries around the world, concealed from the public, men with that special edge know that when it comes to developing the most brilliant intense coloration covering the full breadth of the spectrum, that when it comes to developing luxuriant plumage, full weight and all those enviable qualities of vitality and durability Avia has no peer.

Available from leading bird supply shops or from:

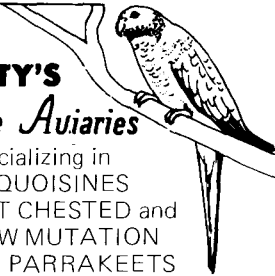
NUTRA-VET RESEARCH CORPORATION, 201 Smith Street,
Poughkeepsie, NY 12601. 914-473-1900

1 oz. \$2.99 — 2 oz. \$3.59 — 5 ozs. \$7.29
9 1/2 ozs. \$10.99 — 20 ozs. \$18.99 — 5 lbs. \$58.99
10 lbs. Polyethylene pouche \$91.00

PLEASE ADD \$1.50 FOR SHIPPING AND HANDLING ON ORDERS UNDER \$10.99



PAT'S BIRD RANCH
Birds • Nest Boxes
Carriers
Special Boxes Made
to Order
(213) 443-2886
Roger Compton
9359 Rush Street
S. El Monte, CA 91733



SMITTY'S
Turquoise Aviaries
specializing in
TURQUOISINES
SCARLET CHESTED and
YELLOW MUTATION
BOURKE PARRAKEETS
Catering to serious breeders only
RALPH V. SMITH
P.O. Box 27, Calimesa, CA 92320
(714) 795-7272



*The Gilded
Bird Cage
Aviary*
Selective Cage Bred Birds
for the discriminating breeder
Cockatiels • Finches • Lovebirds
Dr. Richard E. Baer (614) 836-5832
Telephone inquiries only,
No correspondence



**THE
AVICULTURAL
SOCIETY
OF QUEENSLAND**
welcomes new members
An Australian Society catering for all birds
both in captivity and in the wild. We put out
a bi-monthly magazine on all aspects of
aviculture and conservation.
Anyone interested in becoming a member
please contact **Ray Garwood**, 19 Fahey's
Road, Albany Creek 4035, Qld., Australia.
Annual subscription rates are \$12.00 (Aust.)
air mail.



Sky Kings Aviary
5165 ROUTE 43
KENT, OHIO 44240
Vicky and Kent
Kibler
— WE SHIP —
LARGE SELECTION OF
IMPORTED AND DOMESTIC BIRDS
216/678-0488
Telephone inquiries only,
No correspondence

TABLE 1.

Japanese Quail Exposure Results.

Pan type	Contents	Temperature	Results
Teflon®	empty	315°C	no deaths
Teflon®	empty	330°C	100% deaths
aluminum	empty	450°C	no deaths
cast iron	empty	450°C	no deaths
Teflon®	corn oil	320°C	100% deaths
aluminum	corn oil	320°C	no deaths
aluminum	corn oil	310°C*	100% deaths
cast iron	corn oil	290°C*	100% deaths
Teflon®	butter	280-318°C	100% deaths
aluminum	butter	290°C	100% deaths
cast iron	butter	260°C	100% deaths

*Corn oil ignited causing a rapid temperature rise.

TABLE 2.

Parakeet (Budgerigar) Exposure Results.

Pan type	Contents	Temperature	Results
Teflon®	empty	270°C	no deaths
Teflon®	empty	280°C	100% deaths
cast iron	empty	330°C	no deaths
Teflon®	butter	260°C	100% deaths
aluminum	butter	260°C	100% deaths
cast iron	butter	260°C	100% deaths

a lack of available birds. The results in Table 2 again suggest a very narrow temperature over which the PTFE coating becomes deadly. Butter, once again, appears to be worse than the Teflon® finish alone.

What do these findings mean to us as bird owners? At first glance it would seem as though any type of frying is extremely dangerous to birds. Nothing could be more in error. While frying temperatures vary with the meal, the normal temperatures associated with frying lie well below the ALT values established. For instance: fried veal cutlet, 150-195°C; French fries, 200°C; fried eggs, 190°C; fried noodles with fat, 180-190°C and fried fish fillet, 130°C. These temperatures are considerably less than even the most conservative ALT for the highly susceptible budgerigar; 270°C. Also remember that kitchens have much better ventilation than the experimental chamber used.

Clearly, the watchword when cooking around your birds is caution; regardless of the type of pan being used. Remember that conditions producing little health consequences for you can be deadly to your birds. But the notion that Teflon® coated pans are inherently bad for birds is clearly false. They pose no more hazard than everyday cooking oils. As with most things in life, common sense is your greatest ally.

ACKNOWLEDGEMENT

I am indebted to Susan Snyder of DuPont for her assistance during the research for this article.

REFERENCES

1. S.W. Snyder, "Toxicity of Polytetrafluoroethylene", 1977, E.I. DuPont de Nemours and Company, Haskell Laboratory for Toxicology and Industrial Medicine, Wilmington, DE 19898.
2. T.B. Blandford, *et.al.*, *Vet. Rec.*, 96, 175 (1975).
3. F.D. Griffith, S.S. Stephens and F.O. Tayfun, *Am. Ind. Hyg. Assn. J.*, 34, 176 (1973)
4. R.S. Waritz and B.K. Kwon, *Am. Ind. Hyg. Assn. J.*, 29, 19 (1968)

BIOGRAPHY

Bob Kroshefsky received his B.S. in chemistry from Rensselaer Polytechnic Institute, Troy, NY, in 1972 and his Ph.D. in inorganic chemistry from Iowa State University, Ames, IA, in 1977. Since then he has worked as a research chemist for Mobay Chemical Corporation in Pittsburgh, PA. He and his wife, Karen, have been raising budgerigars, cockatiels and, more recently, grass parakeets since 1976.

1980 AVY AWARDS

coming up soon

If interested individuals or clubs have not received nomination forms by April 15, 1980, or if you need extra forms, please request additional forms to be sent to you by writing to: AVY AWARDS, American Federation of Aviculture, P.O. Box 327, El Cajon, CA 92022.

This year the Awards Committee has special forms to accommodate commercial and professional institutions. Please specify your needs.

To satisfy the interest and concern about the 1979 Gold Avy Award, World 1st Breeding, additional international research and conformation has determined that Signor Bertagnolio, Rome, Italy, has preceded all other known breedings of the rare and endangered Pileated Parrot, *Pionopsitta pileata* of southeastern South America.

The erroneous Award presented at the AFA Convention, Hollywood, Florida, August 1979, has been rescinded.

Plan ahead for
AFA's

6th National
Convention

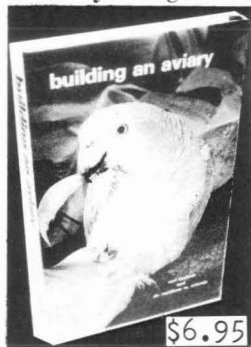
August 20th thru 24th, 1980
at the spectacular
Aladdin Hotel
Las Vegas, Nevada

AFA members, guests, and general public invited to attend.

Details will be available in future Watchbirds.

999 Picture Pet Hobby Supply Catalog \$1.00 - deductible from order.

"Everything—You Name It"



\$6.95



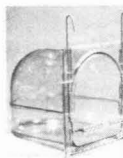
Cast Aluminum
CAGE CUPS

Typically most all pet cages are equipped with a plastic cage cup, glass or ceramic cups. The exception is the Deluxe Cage pictured to the right. All may be chewed up eventually by pets or can be broken. This heavy duty cast aluminum cage cup is nearly indestructible. Measures 3-5/8" long x 2-5/8" wide x 1-3/8" deep—slightly tapered.

\$3.50 each
6 - \$15.00 Prepaid
12 - \$25.00 Prepaid



3 POP
BOTTLE
WATERER'S
\$3.50



BIRD
BATH

Made of high quality transparent plastic. Fits to the outside of the cage.

\$4.00 each
6 - \$19.00 Prepaid

BIRD BREEDERS
WIRE NESTS

4" diameter, metal frame with screen wire. Equipped with hanger.

\$2.00 each
6 - \$10.00 Prepaid



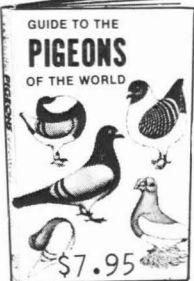
- Automatic Turning Incubators
- PIGEONS - GUINEAS QUAIL
- PHEASANTS - PARTRIDGE
- BANDS - NESTS - CAGES
- PET BOOKS - TRAPS
- MEDICATIONS - HOBBY ITEMS
- RARE FANCY POULTRY
- AVIARY EQUIPMENT
- BABY CHICKS - EGGS
- DUCKLINGS - GOSLINGS

DELUXE FEED SAVER FEEDER \$15.95



Extra sturdy feeder developed for small birds -- Quail, Pigeons, Canaries, Parakeets, Pheasants, Bantams. The big feature is that the feed saver catch tray is removable to make it easy to recover the lost feed. It also has a clear plastic front, making it easier to check on the feed level. Perch is removable, adjustable. 3 pound capacity. Measures 10 1/4 x 9 1/2 x 5 inches. Removable tray is 5 x 10 x 1 3/4 inches deep. Lip of feeder is 3/8 inches deep. This feed saving feature will more than pay for the cost of the feeder.

\$15.95 PREPAID

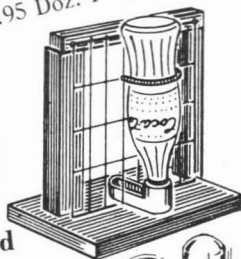


\$7.95

CAST ALUMINUM
POP BOTTLE
WATER FOUNTAINS

With an ordinary pop bottle you have a handy fountain, ideal for small groups. Rabbits, Guinea Pigs, Parrots, Cage Birds cannot chew to destroy them. Held to the outside of your cage by a holding spring, it projects inside — most convenient. Measures 2" x 1", only 1/2" deep.

\$8.95 Doz. Prepaid



\$8.95 Doz. Prepaid

SMALL FEEDERS
FOUNTAINS

Canaries, Parakeets,
Bantams, Game Chicks

Capacity: Cup of water or feed. Spill-proof, keeps seed and water free of contamination. The perfect answer for small groups.

No. 402 Seed Feeder
No. 403 Water Fountain
6 - \$9.50 Prepaid
12 - \$16.50 Prepaid

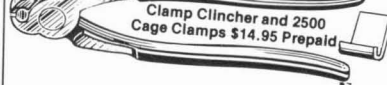


\$4.95

Canary—Parakeet
Plastic Bandettes

25\$2.50
50\$4.50
100\$8.00

MAKE YOUR OWN-TRAPS-CAGES



Clamp Cincher and 2500
Cage Clamps \$14.95 Prepaid

CAGE BIRD TUBE
DRINKER-FEEDER

Attaches to your cages easily with attaching clip included. 15/16" diameter, 8 inches long. Drinking area 1/2" x 1 1/4"

3 - \$4.00 Prepaid
12 - \$9.50 Prepaid

DEALERS
WANTED

for Stromberg Books
and Exclusive Feeders



\$4.95

Stromberg's
CHICKS & PETS UNLIMITED
PINE RIVER, MINN. 56474