

Plants for a Permaculture Future



Building on the current collaboration between
Plants For A Future (PFAF) and the
Permaculture Association

Presentation on 8 September 2015
at IPCUK Conference

Introduction

- Dr Christine Marsh, Trustee/Director of charity Plants For A Future (PFAF) since 2005
- The Charity PFAF incorporated in 1996 to support the work of
- Ken Fern, plants researcher from 1989
- PFAF supports an online database: www.pfaf.org, of 7,000 useful plants, freely available to over a million users p.a. worldwide
- How can permaculture designers make better use of the database?



Wendy Stayte, PFAF Trustee,
with Ken Fern, June 2015

On the Land

Making the Desert Fruitful



‘The Field’, Ken & Addy Fern’s 28 acre site in Cornwall (1989 to present);

Was degraded agricultural land on exposed, sloping site;

Now half natural woodland, half diverse food forest;

Over 10 years Ken planted 1,500 species of plants with edible & other uses.

Online and International Sharing Knowledge of Useful Plants

PFAF becomes online and international (1996 via 2005 to present)

Ken Fern set up website and database with details of 1,500 species he had grown;



Added details of other useful species;

2005: New Trustees further developed website and database of 7,000 useful species.


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Cyperus esculentus - L.

Common Name	Tiger Nut, Yellow nutsedge, Nut Grass
Family	Cyperaceae
Synonyms	
Known Hazards	None known
Habitats	Muddy soil and shallow water, also as a weed of cultivated ground in southern Europe[50].
Range	Original range is obscure, the plant is a widespread weed from the Tropics to the Temperate zone.
Edibility Rating	 

g data from pfaf.org...



<http://commons.wikimedia.org/wiki/User:Blahedo>



High quality plants information

Elaeagnus x ebbingei: commonly grown as a hedge in gardens where it forms an extremely wind-resistant screen 6ft or more high. [...] about 15ft tall and wide [...] extremely tolerant [...] full sun, deep shade and most soils [...] dislike[s] waterlogged soils.

flowers in late autumn and ripens its fruit in late Spring, long before the traditional early fruits such as strawberries and unripe gooseberries. When fully ripe these fruits have a delicious rich flavour, their single large seed can also be eaten and has a vague hint of peanut in its taste. This plant is an extremely good companion, helping to enrich the soil with nitrogen and thereby boosting the growth of neighbouring plants.

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Elaeagnus x ebbingei - A Plant for all Reasons



Some plants are so exciting and have so much potential for the permaculture grower, that I really cannot understand why they are not better known. Just one such plant is *Elaeagnus x ebbingei*. This hybrid species of garden origin, the result of a cross between *E. macrophylla* and *E. pungens* (or perhaps *E. x reflexa*), is commonly grown as a garden ornamental - in the future I hope it will be extensively grown as a multi-purpose plant in many permaculture systems.

Relatives.

Before I go into specific details of this plant, I would like to take a brief look at some of the plants that are related to it. *E. x ebbingei* belongs to the family *Elaeagnaceae*. This is a fairly small family comprising just three genera and fifty or so species, yet it contains a very high percentage of plants for permaculture. All of the species, for example, have potentially edible fruits, though in some cases they are not that desirable. The three genera are:-

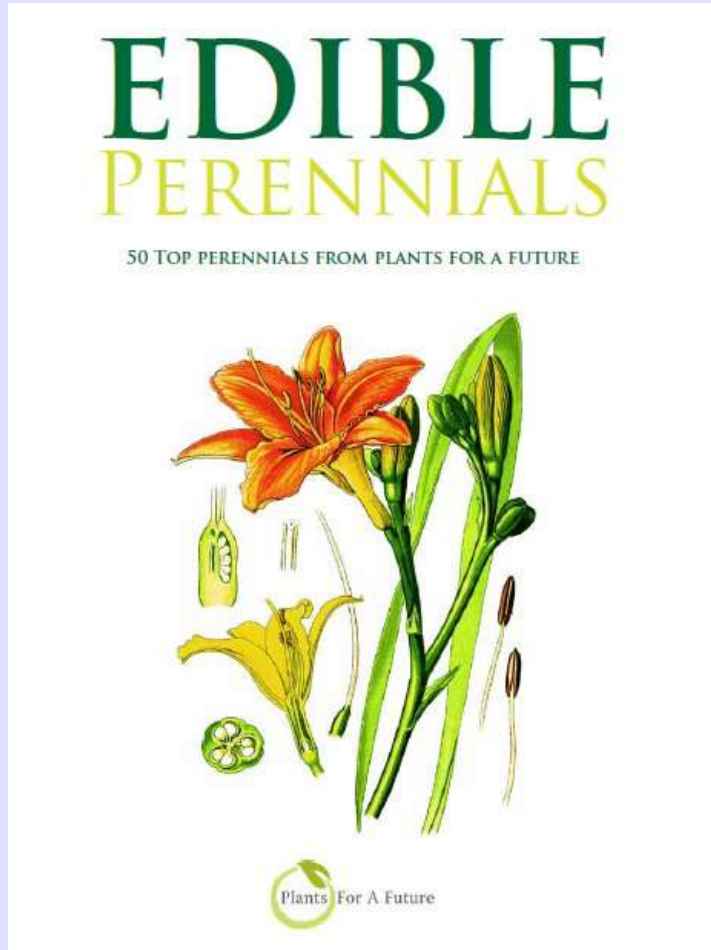
PFAF search facilities

Search over 7000 edible and medicinal plants using criteria including: common and Latin names, keyword, family, habitat and use:

- **edible:** e.g. beverages, gelatine, oil
- **medicinal:** e.g. acrid, antacid, antibiotic
- **other:** e.g. alcohol, beads, bottles, fencing, fuel
- **special uses:** e.g. nitrogen fixer, hedge

‘Search Properties’ allows you to search for a number of plant features at once, e.g. for a plant that needs a light sandy soil, is between 1m and 5m high, and likes shade - the database will then present a list of plants that have all three of these features.

Permanent Mixed Plantings



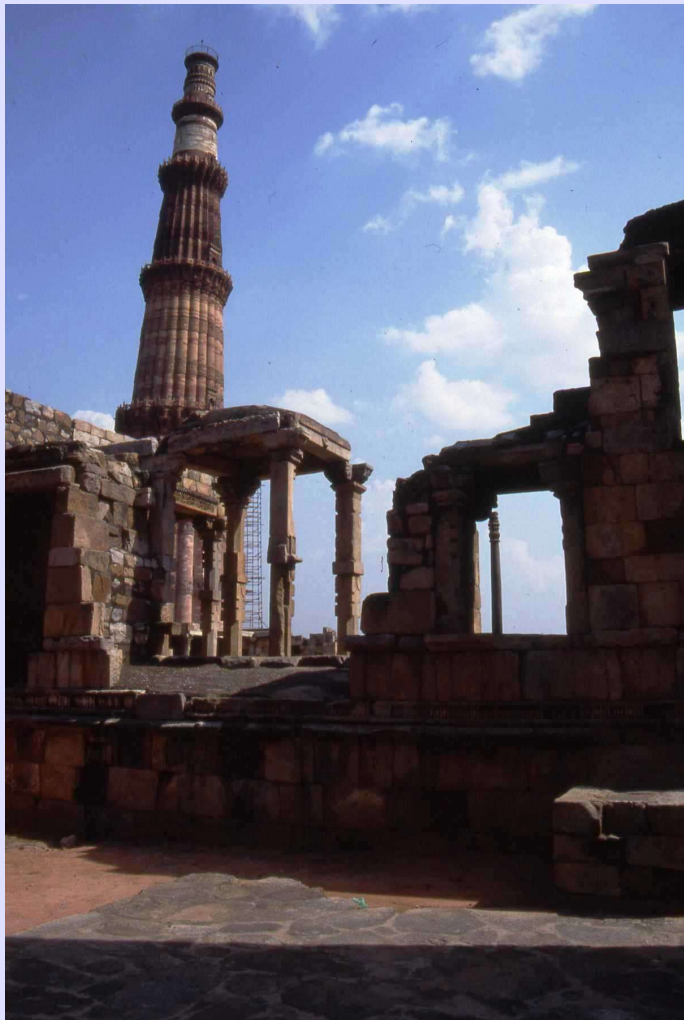
‘Current interest in forest or woodland garden designs reflects an awareness that permanent mixed plantings are inherently more sustainable than annual monocultures. They safeguard and enrich soil ecosystems, enable plants to form cooperative combinations, make use of layers above and below the soil, and they create benign microclimates which soften winds and recycle the rain. The challenge is productivity: how can yields of useful foods and other useful materials be maximised? Plants For A Future is a resource for discovering some of the answers.’

Plants for a Permaculture Future

- Millions of local agricultural ecosystems designed to meet local needs using local resources
- Each local design includes one or more areas of land with diverse permanent plantings
- PFAF database invaluable resource for details of such plantings
- Select plants for particular uses, suited to situations within an ecological design based on natural models, especially woodland or forest gardens.



Agriculture was the Worst Mistake in the History of the Human Race (Jared Diamond)



What is the Alternative? Who are the Pioneers?

Looking Back

- 40 years of Permaculture
- 100 years since Tagore and Elmhirst Rural Reconstruction initiatives in India and UK

Future

- Back to Village and Forest
- Can we regenerate the forests destroyed by agriculture?
- Can these forests meet the needs of current and future world population?



Plants for a Permaculture Future?

Ferns' original design: 30 acres, half natural woodland, half vegan-organic food forest. Replicated worldwide – would that work?

12 billion acres of agricultural land & 10 billion people by 2050 = over an acre per person.

In theory vegan diet could support 5 people per acre,

'Humans can only maintain 150 stable relationships' (Dunbar);

7 groups cooperating together locally = 1,000 people;

10 million neighbourhoods, 1000 acres diverse perennial plantings.

Many obstacles: access to land, land degradation, urbanisation, freedom to practice subsistence agriculture.

Plants for a Permaculture Future?

Discussion

- Is 'Back to Village and Forest' just a Utopian vision?
- Can we regenerate the forests destroyed by agriculture?
- Could the new forests meet the needs of current and future world populations?
- Could such a Transition be made in a generation?
- How could the collaboration between Plants For A Future and Permaculture Research facilitate such a Transition?

