



Paper Yarn woven into fabric

MANY unusual fibres have been used as substitutes for the more conventional textile fibres. They have been found to be a valuable resource, especially in times of shortage. A great variety of plants have been exploited world wide for fibrous qualities. Some of the following we may take for granted as being sources of food, but they have also been processed by indigenous peoples as a valuable source of textile fibres.

Paper

The major development for paper textiles came with the introduction of woven fabric made from a soft spun paper yarn. Paper yarn is paper pulp or sheet formed paper that has been transformed by cutting and twisting into a type of yarn. This technique produced a hard wearing, flexible, breathable fabric suitable for garments which was easier to work with than sheet paper as it had similar qualities to conventional textile material.

woven into kimono fabrics. It may be woven in its natural state or dyed using the resist dyeing kasufi technique.

Coconut

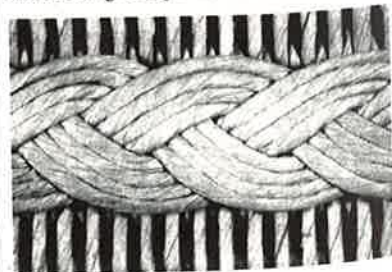
Coir fibre is contained in the fruit or husk of the coconut palm (*Cocos nudifera*). When the fruit is split the fibrous tissue lies beneath the outer covering of the fruit and envelops the kernel or coconut. The fibre collected from mature husks can be used for upholstery and brush making. The husks are split either by hand or machine and the fibre is then retted (soaked) before being spun. The fibre is extremely strong and durable and is well suited to floor coverings, for which it is becoming increasingly popular.

The coconut is an extremely versatile and economically viable crop, providing timber from the trunk, thatch and coarse fibre from the leaves, any by-products of which constitute Coir fibre compost. Food from the fruit and oil is extracted that has a wide variety of end uses, including cooking and cosmetics.

Hemp

Hemp is heralded as the answer to our environmental and economic recovery, and yet because it is a member of the cannabis family, it is banned in many countries. Hemp was a popular 17th century fibre and is making a 20th century comeback. It grows quickly, without pesticides or herbicides (as it out-grows weeds) and on poor soil in harsh climates.

Hemp fibres are extracted from the plant stem – which is 30 per cent bast fibre. Fibres are coarse, commonly blended and are found in a wide range of end uses from T-shirts to bags and shoes. However, a good deal of development is needed to make fibres softer and more stretchy. The infamy of cannabis has generated much publicity for hemp textiles and fashion has joined the brouhaha with Katherine Hamnett, among others, introducing hemp into her collection. ^{ed}



Spun Kraft paper woven and braided for Lloyd Loom furniture

ALTERNATIVE FIBRES

Kate Fletcher of the Textile Environmental Network introduces some unusual textiles

Factories across Northern and Eastern Europe spun paper as a substitute for cotton and jute during wartime shortages. In America, spun paper was introduced as a wicker substitute for producing woven furniture. This fibre was found to be cheaper and more readily available than willow oslers during the First World War.

Banana

The banana family (*musaceae*) is the source of two fibres. Abaca is extracted from the stems of *Musa Textillis*, a variety of banana that produces hard, inedible fruit.

The coarse outer leaf sheaths are stripped to reveal the fibre, the fibre on the outer sheaths being coarser than the inner. The fibre must be collected before the fruit is formed.

Musa Sapientum, edible banana plant is used to produce Bashofu, Japanese banana fibre cloth. The woven fabric is very smooth and fairly stiff, and often

Further details of these and other alternative fibres can be found in the latest edition of *AtTENtion!* the newsletter of the Textile Environmental Network (TEN). For information about these publications and details about TEN's activities contact TEN, c/o National Centre for Business & Ecology, The Peel Building, University of Salford, Manchester, M5 4WT. Tel: 0161745 5276 fax: 0161745 5041.