Australian Indigenous Medicine

Weeping Emu Bush (Eremophila longifolia)

Australian Indigenous Medicine

- Overview

- Society and Health

- Culture of Disease and Healing
  - Medicine men/shamanism
  - Herbal lore/ Aboriginal Pharmacopeia

Australian Indigenous Medicine

Session Aim

- To interrelate the specific Australian Indigenous Medicine with the Indigenous society in a historic context
Australian Indigenous Medicine

At the end of this session, students should be able to:

- Recognize the specific cultural context of Australian Indigenous Medicine
- Identify the elements that differentiate the indigenous medicine paradigm from the biomedical paradigm
- Discuss the current indigenous health crisis in view of traditional medicine
- Appraise the diversity of aboriginal pharmacopeia
- Discuss the conflict between traditional knowledge and intellectual ownership and multinational search for new medicines
Australian Indigenous Medicine

from lismore aboriginal art – google images
www.dailypress2.com
Overview

- Australian Aboriginal history started more than 40,000 years ago.
- Aboriginal cultures are heterogeneous – there are 5600 tribal groups in Australia and most members have a tribal identity only.
- Traditional Aboriginal Medicine is interconnected to land, culture, family, beliefs and social fabric of the Aboriginal societies.

Hetzel, 2000
Society and Health
Historic Context

- The first ecosystem of the Aboriginal people is that of the nomadic hunter-gatherer more than 40000 years ago.
- Food is provided by men fishing and hunting and by women gathering seeds, plants and fruit.
- Uncertain food availability and changing seasons demanded constant adaptation and movement from place to place.

Hetzel 2000
Society and Health

- The second ecosystem begins with the arrival of the First Fleet in 1788 when the Europeans pushed the Aboriginals from their hunting grounds and develop the land for agricultural purposes.
- The tragic development over the next 100 years sees many Aboriginals either killed or forced into remote areas.
- To rectify the situation a desperate government invented the Reserves to ‘protect’ the Aboriginal people. The policy was a total failure and the present state of reduced life expectancy and chronic disease of Aboriginal people is a direct result of this failed policy.
- With loss of connection to the land the loss of self esteem the sense of identity and belonging was lost.
- Hetzel 2000
Society and Health

- From the 1970s a third ecosystem has developed. One aspect is the integration of the traditional hunter-gatherer lifestyle and an agricultural lifestyle together with a return to old tribal areas in central Australia and the Northern Territory.

- This ‘homelands movement’ has also seen a reconnection with traditional and herbal medicine.

- Studies revealed lower rates of diabetes, obesity and hypertension in homeland people compared to those living in centralized communities in central Australia.

- Hezel 2000
Society and Health

- This third ecosystem also created a ‘two-way-medicine’ where Aboriginal health workers use traditional medicine together with western medicine practices.

- Traditional healers have been employed by the Northern Territory Department of Health successfully since the early 1970’s.

- Even if western medicine is chosen to treat illnesses indigenous patients continue to explain the cause of disease through traditional beliefs.

- Dayalan 2000
Society and Health

- Traditional Aboriginal medicine regards ill-health more than physical illness, it is a manifestation of a multitude of factors, including spiritual and emotional alienation from the land, culture and family.

- Aboriginal Australians define identity holistically in terms of kinship, ritual, spiritual relationship and responsibilities, all of which are interconnected and inseparable from the land [Morgan et al 1997]

- Balance is a central concept – between family members, tribal group and nature
Culture of Disease and Healing

- “Traditional Aboriginal medicine is a complex system closely linked to the culture and beliefs of the people, knowledge of their land and its flora and fauna. Its survival is explained by its ‘embeddedness’ in the social fabric of Aboriginal culture” [Devanesen, 2000]

- “Individual sickness or injury will be understood by Aboriginal people in terms of their impact on a person’s ability to fulfill social and spiritual commitments”

Morgan et al 1997
Culture of Disease and Healing

- One of the largest tribes of the NT are the Warlpiri people. The system of health has several components:
  - Traditional healers are referred to as *ngangkaryi* which means ‘healing power.’
  - *Yawulyu* ceremonies that can be conducted by women healing songs and herbal medicine
  - There are tribal laws governing behaviours with aim at preventing disease

Devanesen, 2000
Culture of Disease and Healing
Image from Devanesen 2000

HEALTH SYMBOL FOR YUENDUMU

- Windbreak Shelter
- Carrier for meat
- Digging stick
- Carrier for bush tucker
- Two children
- Husband
- Firesticks
- Husband
- Wife
- Firesticks
- Footprints
- Waterhole
- Digging stick
- Water carrier

NAPANGARDI WOMEN'S JUKURRPA OR DREAMTIME STORY
Culture of Disease and Healing

- The traditional healers usually inherit healing power or acquire it through spiritual experiences. They are specially chosen to remove control of evil spirits and sorcery and restore spiritual wellbeing.

- Traditional healers have a spirit called mapanpa to empower their healing.

- Most serious illness is believed to be brought on by loss to vital substance from the body [soul], introduction of foreign substance into the body [evil spirit] or violation of taboos and sorcery [singing].

- Devanesen 2000
Culture of Disease and Healing

Governing laws can entail:

- Avoiding foods prohibited during life crisis or ceremonies
- Obeying ritual proscriptions [taboos]
- Taking care not to abuse one’s land or trespass on territory of others
- Avoid prohibited sacred sites or approach them only with ritual protection

Devanesen 2000
Culture of Disease and Healing

Reflection:

- Think about how you would define ‘health’ or ‘good health’ in a traditional society system
- Aboriginal languages are said to have no word for health as abstract concept
Culture of Disease and Healing

Image: Bush medicine by Gloria Petyarre  taken from Google Images
Culture of Disease and Healing

Medicine Men / Shamanism

- The traditional healer is conducting the ritual of healing which often includes sucking a sick person to remove evil influence.
- Sometimes the patient is massaged or manipulated.
- The healer often sings during the ritual
- The healer may diagnose the state of the spirit e.g. *kurrunpa yulangu'* [the spirit is sad]

Devanesen 2000
Culture of Disease and Healing

- Walpiri women often perform Yawulyu ceremonies
- aimed at improving health by singing and painting designs on a sick person
- But they are not able to remove the sorcery. Only the traditional healer has the power to remove these influences
- Davanesen 2000
Culture of Disease and Healing

Herbal Lore

- The traditional healers do not use herbal medicine in their practices.
- Herbal medicine and plant knowledge is not owned by any particular group.
- Its use and knowledge is shared by the whole tribe and family.
- The botanical knowledge was essential for survival and with no written language committed to memory.
- The knowledge about optimal seasonal times, correct methods of preparation and indications were passed on through example, song and dance.

Stack 1989
Herbal lore

- Collecting leaves, seed, pods or barks is strongly associated with rituals.
- Time of collection is important as the potency of plants vary according to maturation, season or soil type.
- Plant collection is also associated with traditional ownership of the land.
- Tribes confine the use of plants within their traditional boundaries. Plants collected outside the boundaries have no therapeutic value.
- The same plant grown in two tribal areas is often medicinally used in different ways.
- Stack 1989
Culture of Disease and Healing

- Herbal medicine was the first pillar of the Warlpiri health system that was eroded by the introduction of western medicine
- But the homeland movement that brought the Warlpiri people back to their traditional land created a renewal of use of herbal medicine
- In 1988 the first Aboriginal Herbal Pharmacopoeia for the NT was published. Forty communities contributed by describing and demonstrating their herbal remedies
- Devanesen 2000
Herbal lore

- Often food and medicinal plants are viewed interchangeably
- Medicinal plants are used for a multitude of purposes:
  - Medicinal plants are prepared by drying, crushing, boiling, burning for smoke application or reduced to ash
  - *Ficus opposita* leaves are topically used to treat skin conditions like tinea. The sandpaper like leaves are used to rub the affected area until the skin starts to bleed. *Passiflora foetida* is pulped and smeared over the area and left for a day.

- Stack1989
Culture of Disease and Healing
Herbal Lore

- *Ipomoea pes-caprae* has trumpet shaped ping to reddish flowers and grows along sandy beaches. The plant is high in antihistamines and used for pain and first aid for stingray or stonefish stings.

- The leaves are heated on a hot stone by the fire before application

- The plant is used by all cultures in the tropical world who leave close to the sea

- Stack 1989
Culture of Disease and Healing

Herbal Lore

- The fruits of *Solanum aviculare* and *Solanum laciniatium* are used as poultices for joint swellings. They contain solasodine, a steroid used in the production of cortisone and other steroid components.

- *Dubisia hopwoodij* is another plant belonging to the Solanaceae and valued for its alkaloid properties that can be either nicotine or d-nor-nicotine.

- *Pituri* is small dried parts of *Dubisia hopwoodij* mixed with wood ash and chewed in small quantities.

- Stack 1989
Culture of Disease and Healing

Herbal Lore

- Pituri is a psychotropic drug with effects varying from mild stimulation to respiratory depression, depending on quantity.
- It is used as a sustaining drug to numb hunger and fatigue on long treks through the desert.
- The preparation of Pituri was guarded by old men from younger men and women.
- Pituri was mixed with wood ash from *Acacia salicina*, the most alkaline plant ash known.
- The mixing with ash facilitates the release of active alkaloid. The addition of alkali to a nicotine containing plant is used in many cultures to potentate the effect.
- Stack 1989
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<th>HEADACHE</th>
<th>COUGHS, Colds</th>
<th>FEVERS</th>
<th>DIARRHEA</th>
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<td>Red ash (Alphitonia excelsa)</td>
<td>Lemon grasses (Cymbopogon)</td>
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<td>Headache vine (Clematis microphylla)</td>
<td>Fuchsia bushes (Eremophila)</td>
<td>Kapok tree (Cochlospermum fraseri)</td>
<td>Eucalypt bark (Eucalypt)</td>
<td>Tree orchid (Dendrobium affine)</td>
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<td>Rock fuchsia bush (Eremophila)</td>
<td>Tea trees (Melaleuca)</td>
<td>Lemon grasses (Cymbopogon)</td>
<td>Cluster fig (Ficus racemosa)</td>
<td>Spike rush (Eleocharis dulcis)</td>
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<td>Liniment tree (Melaleuca symphyocarpa)</td>
<td>River mint (Mentha australis)</td>
<td>Red river gum (Eucalyptus camaldulensis)</td>
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<td>Paperbark tea trees (Melaleuca)</td>
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<td>Tamarind (Tamarindus indica)</td>
<td>Great morinda (Morinda citrifolia)</td>
<td>Tea tree (Melaleuca viridiflora)</td>
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<td>Snakevine (Tinospora smilacina)</td>
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<td>Bark and flower decoction drunk</td>
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<td>Crushed plant applied</td>
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<td>External wash of boiled leaves</td>
<td>Infusion drunk</td>
<td>Bulb sap dabbed on cuts</td>
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<td>Steamed leaves inhaled</td>
<td>Bark infusion drunk</td>
<td>Decaying plant bound to wounds</td>
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<td>Bath of crushed leaves in water</td>
<td>Root infusion drunk</td>
<td>Bark wrapped as a bandage</td>
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<td>Leaf infusion drunk</td>
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<td>Bark infusion poured into wounds</td>
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<td><strong>ACHES AND PAINS</strong></td>
<td>Root decoction applied</td>
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<td>Mashed root infusion rubbed on</td>
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<td>Wash with leaf decoction</td>
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<td>Rub with crushed nut and ochre</td>
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<td><strong>STINGS</strong></td>
<td>Nipan (Capparis lasiantha)</td>
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<td>Native hop (Dodonaea viscosa)</td>
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<td>Beach convolvulus (Ipomoea pes-caprae)</td>
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<td>Snakevine (Tinospora smilacina)</td>
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<td>Peanut tree (Sterculia quadrifida)</td>
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<td>Whole plant infusion applied</td>
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<td>Chewed leaves bound to sting</td>
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<td>Heated leaf applied</td>
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<td>Root poultice applied</td>
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<td>Heated leaves pressed on sting</td>
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<td><strong>RHEUMATISM</strong></td>
<td>Blackwood (Acacia melanoxylon)</td>
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<td>Konkerberry (Carissa Ianceolata)</td>
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<td>Beach bean (Canacalia rosea)</td>
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<td>Tick-weed (Cleome viscosa)</td>
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<td>Stinging tree (Dendrocnide moroides)</td>
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<td>Nettle (Urtica)</td>
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<td>Bathe in bark infusion</td>
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<td>Oily sap rubbed as liniment</td>
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<td>Mashed root infusion rubbed in</td>
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<td>Leaves applied</td>
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<td>Boiled leaves and bark rubbed in</td>
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<td>Patient beaten with leaves</td>
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<td><strong>SORE EYES</strong></td>
<td>Ironwood (Acacia melanoxylon)</td>
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<td>Green plum (Buchanania obovata)</td>
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<td>Regal birdflower (Crotalaria cunninghamii)</td>
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<td>Emu apple (Owenia acidula)</td>
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<td>Fan flower (Scaevola sericea)</td>
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<td>Root decoction administered</td>
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<td>Infusion of inner bark applied</td>
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<td>Sap or leaf decoction given</td>
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<td>Wood decoction applied</td>
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<td>Fruit juice applied</td>
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<td>SORE EARS</td>
<td>TOOTHACHE</td>
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<td>River mangrove (<em>Aegiceras corniculatum</em>)</td>
<td>Leaf decoction applied</td>
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<td>Lemon grass (<em>Cymbopogon</em>)</td>
<td>Root decoction poured</td>
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<td>Native hop (<em>Dodonaea viscosa</em>)</td>
<td>into ears</td>
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<td>Lady apple (<em>Syzygium suborbiculare</em>)</td>
<td>Boiled root juice applied</td>
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<td>Fruit pulp applied</td>
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<td>Green plum (<em>Buchanania obovata</em>)</td>
<td>Tooth plugged with shredded wood</td>
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<td>Denhamia (<em>Denhamia obscura</em>)</td>
<td>Tooth plugged with inner bark</td>
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<td>Supplejack (<em>Flagellaria indica</em>)</td>
<td>Benumbing stem chewed</td>
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<td>Pemphis (<em>Pemphis acidula</em>)</td>
<td>Burning twig applied</td>
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<td>Quinine berry (<em>Petalostigma pubescens</em>)</td>
<td>Fruits held in mouth</td>
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Herbal Lore

- Plants were used in many ways: Leaves and twigs of *Duboisia myoporoides* contain large amount of hyoscine.
- They were sprinkled in waterholes to ensure emus which drank the water were stupefied and easily captured. Fish were affected in the same way.
- Aboriginals placed some strips of the tree beside the waterhole to indicate to others that the water had been poisoned.

- Stack 1989
Culture of Disease and Healing
Herbal lore

- Aboriginal people view foods as their medicine and use foods known to strengthen the body.
- Witchetty grubs [Xeleutes] are crushed and used as burn or wound treatment. Grubs are known to contain 15% protein, 19% fat, 100mg thiamine and 5mg VitC
- The green plum *Terminalia ferdinandina* contains 3150mg/100g of Vitamin C

- Devanesen 2000
Culture of Disease and Healing
Herbal Lore

- The Northern Territory Department of Health launched the Bush Food program in 1981
- It aimed at establishing sustainable record of traditional food practices and beliefs
- Both Bush Medicine and Bush Food programs stimulated a reciprocal learning process between two cultures
- Two way medicine requires support and ongoing research to evaluate the therapeutic value of traditional medicine
- Devanesen 2000
Culture of Disease and Healing

- The NICM Report on Indigenous medicine states that
- Less than 2% of Australian plants had been explored [international rate: 12.5%]
- The rate of research on the value of using Australian Indigenous Medicine for improved population health appears rather low in international context
- There is great concern at allowing overseas companies to export plants and materials for research and commercial benefit to the detriment of traditional owners
- NICM Report 2009
Reflection

- Compare the Australian Aboriginal paradigm of health with the biomedical model
- Bio-prospecting, the search for new plants with medical properties is increasing worldwide, about half of the most used medicines are based on plants.
- Great biodiversity is usually found in areas where indigenous people live. How does bio-prospecting intercept with their right for intellectual property?
Recommended sites for further information

- http://www.indigenousaustralia.info/food.html This site has a chapter on bush food
- http://www.bri.net.au/medicine.html Aboriginal Bush medicine site, it contains a table of remedies and indications
References

- Devanesen, D 200, “Traditional Aboriginal Medicine Practice in the Northern Territory’: International Symposium on Traditional Medicine 11-13 September 2000, WHO, Kobe, Japan
References continued