



## QUEENSLAND BY DEGREES: A COMMUNITY GEOGRAPHY

### COLLECTOR'S GUIDE

**Welcome and thank you** for considering contributing to the Royal Geographical Society of Queensland's community geography project. If you decide to take part in the project, please email Kath on [admin@rgsq.org.au](mailto:admin@rgsq.org.au) and notify her which point(s) you will be tackling. You can tell from our website site ([www.rgsq.org.au/qldbydeg.htm](http://www.rgsq.org.au/qldbydeg.htm)) which points are still available.

This guide will help you find the confluence point that you have selected and take the needed photos. It also outlines the information that we would like you to pass on to us on the locality of the point and the surrounding area that lies within the degree square that surrounds the point (roughly within 55 km).

**Note: The list of topics we are asking for is presented as a guide. If you cannot find any information on a particular subject that is OK – simply leave that heading blank and we will try to locate other sources, or it may not apply to this locality. Conversely, if we have neglected to include something that is locally important, please include it.**

#### Finding the Point

Each confluence point is the junction of a whole degree of latitude and longitude and the objective is to locate that point on the ground, take photos from that point, and make geographical observations of the locality. We are not looking for absolute precision; rather we are looking for photos and information that are representative of the locality. For example, if the actual point fell in the bottom of a gully, the photographs would really be meaningless, so a viewpoint from above the gully would be more appropriate. Similarly, most points will fall on private land and it may not be possible to reach the precise point without trespassing. In that case, if permission of the owner cannot be obtained, photographs from the nearest point of public access (preferably within a kilometre of the point) will be appropriate, unless of course you have access to a helicopter!

A map or maps showing the point in relation to roads and property boundaries together with the individual site collection form can be downloaded from the web site ([www.rgsq.org.au/qldbydeg.htm](http://www.rgsq.org.au/qldbydeg.htm)). You might also want to use *Google Earth* to download a high resolution satellite image of the location as a guide. The best available topographical maps (preferably scales such as 1:25,000 or 1:50,000) would also be useful in locating the point. The task of navigating to the point will require some map reading skills and, if available, a GPS receiver such as a car navigation system.

#### The Photos

The objective is to obtain photographs of the surrounding landscape to the north, south, east and west. It would be best to try and get the photos between 10.00 am and 2.00 pm so that the sun is reasonably

high in the sky, though this will not always be possible. Digital images are preferred so that they can simply be emailed to us. Please name each photo file with the point reference and the direction in which the image is looking. For example, for the photo at 27°S 153°E looking north, a file name such as '27.153N' would be fine. If you only have a film camera we would appreciate it if you could send us prints with accompanying caption notes so that we can scan them for inclusion in the study. Photos will not be returned.

### **The Locality Information**

Point Name: A provisional name for the point has been assigned. If you think there is a more appropriate name please let us know.

Location: A narrative description of where the site is located. This could include:

- Name of the property (e.g. national park, station property, etc) within which the point falls
- Nearest populated place and/or significant physical feature
- Road or roads close to the point
- Local government area
- Major drainage catchment

The Landscape: A narrative description in your own words, (preferably using the standard terms discussed below) of the following features in the immediate vicinity of the location:

- Landforms and elevation
- Soils and geology of the site
- Vegetation around the site
- Fauna within the general location of the point including known rare or endangered species
- Current land use surrounding the site (e.g. pasture; wheat crop; forest plantation, etc)

The Climate: We will be able to access data from the Bureau of Meteorology, however, if you have local rainfall and temperature observations at, or close to, the point that would be useful. Where possible we would like to have details of extreme conditions (e.g. highest and lowest recorded temperatures or the highest monthly rainfall ever recorded) as well as mean or median data.

Comments on extreme weather events such as notable cyclones, droughts, heatwaves or bushfires would also be helpful.

### **Within the Degree Square**

A map showing the extent of the degree square in which the point is located at the centre is available on the web site ([www.rgsq.org.au/qldbydeg.htm](http://www.rgsq.org.au/qldbydeg.htm)). The objective is to describe significant features within that area to provide a wider understanding of the diversity/homogeneity of the area. Key groups of information to be included are:

The Indigenous Story: Where possible, include notes on:

- The main indigenous language or tribal group(s) that has occupied the area
- Known use of the land (e.g. hunting, use of fire, fishing, etc)
- Known sites of significance (ceremonial grounds, art sites, middens, etc). There is no need to send us exact locations of sensitive sites. Exact locations will not be included on the website.

Early episodes of conflict (if any)  
Administration (Community Governments, land councils, etc)

European Exploration and Settlement: Where possible include notes on:

Early exploration  
Early settlement (including original vegetation, early land use, crops grown etc)  
Significant historic disaster events such as floods, storms, fires, etc

Today: Include notes on:

Main landform types within the degree square (e.g. mountains, hills, plains, etc)  
Major geological and vegetation types (we can do a lot of this)  
Significant natural features in the degree square (photos would be welcome)  
Significant settlements  
Significant infrastructure (e.g. ports, power stations, water reservoirs, etc)  
Population of the area and key demographic indicators (we can do most of this)  
Land use – primary industry, mining, tourist sites, etc  
Significant environmental and/or social changes affecting the area  
Anything else that you feel is either representative of, or significant within, the area.

If you use a documentary source for the information provided please include the details so that those sources can be properly attributed in the study.

### **Standard terminology**

So that people can make direct comparisons between points we aim to employ standard terms to describe common features including vegetation types, landscape features and land use types. A glossary of the preferred terms is included in the attachment. The criteria we have used for selecting these terms are that they are meaningfully descriptive and not overly technical in their language.

Common names for animals and plants also need to be standardised as far as possible. We suggest that collectors use the following references to get common names:

For mammals: Strahan R (ed) 1983: *The Australian Museum complete book of Australian mammals*, Angus and Robinson or similar work.

For reptiles and amphibians: Cogger H.G., 1992: *Reptiles and amphibians of Australia*, Reed Books, or a similar work.

For birds: any of the field guides that follow the Birds Australia naming convention such as Slater P., Slater P. and Slater R., 2004: *The Slater field guide to Australian birds*, Reed New Holland; or Morcombe M., 2004: *Field guide to Australian birds*, Steve Parish Publishing; or Pizzey G. and Knight F., 1997: *The Graham Pizzey and Frank Knight field guide to the birds of Australia*, Angus and Robinson.

For plants: there are many local plant guides such as the Queensland Museum guide *Wild plants of Greater Brisbane*. The best national database of common names is the Australian Plant name Index maintained by the Australian National Botanical Gardens ([www.anbg.gov.au/anbg/names.html](http://www.anbg.gov.au/anbg/names.html)).

The Queensland Museum produces a series of guides including *Wildlife of Greater Brisbane*, *Wildlife of tropical North Queensland* and *Discovery guide to outback Queensland*. These are an excellent source of information and can be used as a reference for common names

### **Submitting your entry**

Please email your completed entry, and any queries, to: [admin@rgsq.org.au](mailto:admin@rgsq.org.au).

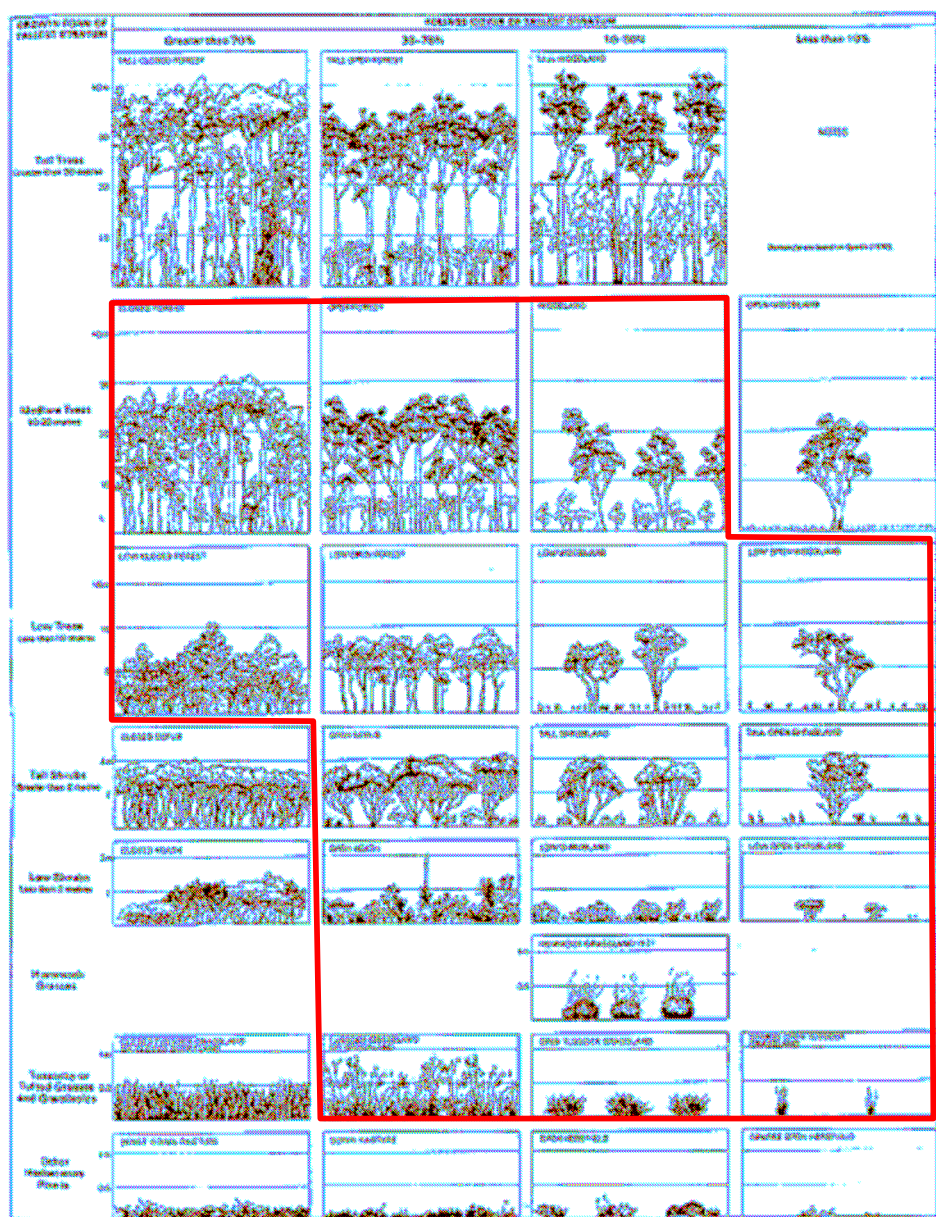
Send each photo as a separate JPG file, or similar graphics file. Do not embed photos in the document. Send the text of the locality information as a Word or Wordperfect attachment. We will take all the formatting instructions out, so it would be a waste to spend time setting it out.

If you don't have access to email, post prints of your captioned photos (will not be returned) and the text to RGSQ, 237 Milton Road, Milton Qld 4064.

## ATTACHMENT: STANDARD TERMS

### VEGETATION TYPES

We have chosen a system that describes the physical structure of the vegetation rather than one that requires a detailed knowledge of the botany or ecology of the types encountered. The system is based on the approach used by J.A. Carnahan (1988) in his maps of Australian vegetation in 1788 and 1988. It is based on: the height of the tallest layer; the density of the canopy cover; the nature of the ground cover layer; and the main group of species present. The forms encountered in Queensland are shown within the red line in the figure (from AUSLIG, 1990<sup>1</sup>).



<sup>1</sup> AUSLIG, 1990: *Atlas of Australian resources*, Australian Survey and Land Information Group, Canberra.

- Closed forest (10-30 m tall with >70% canopy cover)  
e.g. rainforest
- Open forest (10-30 m tall with 30-70% canopy cover)  
e.g. eucalypt forests in coastal areas; cypress-dominated forests of the slopes and plains
- Woodlands (10-30 m tall with 10-30% canopy cover)  
e.g. eucalypt woodlands of the slopes and plains
- Low closed forest (<10 m tall and with >70% canopy cover)  
e.g. mangroves; closed forests of brush box, turpentine and she oak
- Low open forest (<10 m tall and with 30-70% canopy cover)  
e.g. low open forests of eucalypts or *Acacias*
- Low woodland (<10 m tall and with 10-30% canopy cover)  
e.g. low woodlands of *Melaleuca* in the Gulf hinterland
- Low open woodland (<10 m tall and with <10% canopy cover)  
e.g. the eucalypt savannah woodlands of the tropical north
- Open scrub (>2 m tall and with 30-70% canopy cover)  
e.g. the *Banksia* scrub at the northern end of Fraser Island
- Tall shubland (>2 m tall and with 10-30% canopy cover)  
e.g. *Acacia*-dominated scrub of the western plains
- Tall open shrubland (>2 m tall and with <10% canopy cover)  
e.g. *Acacia*-dominated scrub of the Channel Country
- Open heath (<2 m tall and with 30-70% canopy cover)  
e.g. heaths on exposed coastal areas of Cape York
- Low open shrubland (<2 m tall and with <10% canopy cover)  
e.g. saltbush or low *Acacia* scrubs
- Hummock grassland (10-30% canopy cover)  
e.g. Spinifex
- Closed tussock grassland (>70% canopy cover)  
e.g. sugar cane
- Tussock grassland (30-70% canopy cover)  
e.g. bluegrass grasslands of the slopes
- Open tussock grassland (10-30% canopy cover)  
e.g. Mitchell grass areas of the western plains
- Sparse open tussock grassland (<10% canopy cover)  
e.g. desert areas of the far west

## MAJOR LANDFORM TYPES

Major landform types that define a broad region, as distinct from individual landforms, can be used in describing the landscapes within the degree square. More specific landform types may be used in describing the point location. The following typology of landforms has been based on the work of Paine and others (2000)<sup>2</sup> and the 1:5 million regolith landform map of Australia produced by Geoscience Australia. The broad landscape descriptions are taken from Paine and others (2000).

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<sup>2</sup> Paine C., Chan R., Craig M., Gibson D., Ursem P., and Wilford J., 2000: *RTMAP Regolith database field book and users guide*, second edition, Cooperative Research Centre for Landscape Evolution and Mineral Exploration, Canberra.

## Alluvial landscapes

Alluvial plain: A level, or gently sloping, or slightly undulating land surface produced by extensive deposition of alluvium, generally adjacent to a river that periodically overflows its banks; it may be situated on a flood plain, a delta, or an alluvial fan.

Flood plain: Alluvial plain characterised by frequently active aggradation by over-bank stream flow (i.e. by flooding more often than every 50 years) and erosion by channelled stream flow.

Floodout: Flat inclined radially away from a point on the margin or at the end of a stream channel, aggraded by over-bank stream flow, or by channelled stream flow associated with channels developed within the over-bank part.

Delta: Flood plain projecting into a sea or lake, with slowly migrating deep alluvial channels, usually moderately spaced, typically forming a divergent distributary network. This landform is aggraded by frequently active over-bank and channelled stream flow that is modified by tides.

## Coastal lands

Coral reef: Continuously active or relict landform pattern built up to the sea level of the present day or of a former time by corals and other organisms. It is mainly level, with moderately inclined to precipitous slopes below sea level. Stream channels are generally absent, but there may occasionally be fixed deep erosional tidal stream channels forming a disintegrated non-tributary pattern.

Coastal plain: Level landform pattern with extremely low relief either with or without stream channels, built up by coastal, usually tidal, processes.

## Aeolian landforms

Dune fields: Low mounds, ridges, banks, or hills of loose, windblown granular material (generally sand) either bare or covered with vegetation, capable of being moved from place to place by wind but always retaining their own characteristic shape. Various forms exist. Longitudinal dune fields are characterised by long narrow sand dunes and wide flat swales. The dunes are oriented parallel with the direction of the prevailing wind, and in cross section one slope is typically steeper than the other is. Transverse dune fields are characterised by long narrow sand dunes and wide flat swales. The dunes are oriented normal to the direction of the prevailing wind, and in cross section the windward slope is typically steeper than the lee slope. Irregular dune fields have a mixture of longitudinal and transverse dunes, as well as other more complicated forms.

## Erosional landforms

Erosional plain: Level to undulating or, rarely, rolling landform pattern of extremely low relief (< 9 m) eroded by continuously active to slightly active or inactive geomorphic processes.

Rises: Landform pattern of very low relief (9 - 30 m) and very gentle to steep slopes. The fixed erosional stream channels are closely to very widely spaced and form a dendritic to convergent,

integrated or interrupted tributary pattern. The pattern is eroded by continuously active to slightly active creep and sheet flow.

Low hills: Landform pattern of low relief (30 - 90 m) and gentle to very steep slopes, typically with fixed erosional stream channels, closely to very widely spaced, which form a dendritic or convergent integrated tributary pattern. There is continuously active sheet flow, creep, and channelled stream flow.

Hills: Landform pattern of high relief (90 - 300 m) with gently sloping to precipitous slopes. Fixed, shallow erosional stream channels, closely to very widely spaced, form a dendritic or convergent integrated tributary network. There is continuously active erosion by wash and creep and, in some cases, rarely active erosion by landslides.

Mountains: Landform pattern of very high relief (> 300 m) with moderate to precipitous slopes and fixed erosional stream channels which are closely to very widely spaced and form a dendritic or diverging integrated tributary network. There is continuously active erosion by collapse, landslide, sheet flow, creep, and channelled stream flow.

## **Fans**

Fan: Level (< 1% slope) to moderately inclined complex landform pattern of extremely low relief with a generally fan-shaped plan form. The channels form a centrifugal to divergent, integrated, reticulated to distributary pattern. Various morphological forms occur including alluvial fans, colluvial fans and sheet flow fans.

## **Plains**

Plain: Level to undulating or, rarely, rolling landform pattern of extremely low relief (< 9 m). Some types of plains are described under alluvial landforms, and some are also described under erosional landforms.

Depositional plain: Level landform pattern with extremely low relief formed by unspecified depositional processes.

Sand plain: Level landform pattern with extremely low relief, typically without stream channels, aggraded by active wind deposition and rarely active sheet flow.

## **Plateau**

Plateau: Level to rolling landform pattern of plains, rises or low hills standing above a cliff, scarp or escarpment that extends around a large part of its perimeter. A bounding scarp or cliff may be included or excluded; a bounding escarpment would be an adjacent landform pattern.

## **Volcanic landforms**

Lava plain: Level to undulating landform pattern of very low to extremely low relief typically with widely spaced fixed stream channels which form a non-directional integrated or interrupted tributary pattern. The landform pattern is aggraded by volcanism (lava flow) that is generally relict; it is subject to erosion by continuously active sheet flow, creep, and channelled stream flow.

## LAND USE TYPES

The human use of the land is often the most prominent feature of the landscape. There have been several schemes proposed by which to classify land use. We have chosen to use the scheme employed in the Australian Collaborative Land Use Mapping Programme (ACLUMP) described in Bureau of Rural Sciences (2006)<sup>3</sup>. This approach is based on the 6<sup>th</sup> edition of the Australian Land Use and Management (ALUM) Classification developed for the Murray-Darling Basin Commission in 1994. As with the vegetation and landscape classification schemes, the land use classification scheme is hierarchical with six major classes subdivided into numerous secondary and tertiary classes. The depth to which land use should be described will depend on its significance and dominance in the landscape.

### Conservation and natural environments

Nature conservation: Land set aside, usually by government bodies, to preserve, conserve or aid in the restoration of natural habitats. Major sub-classes include wilderness areas, national parks (both terrestrial and marine), habitat management areas and protected landscapes.

Managed resource protection: Areas managed mainly for the sustainable use of natural ecosystems. Subclasses include protected surface water and groundwater supply catchments and areas set aside for traditional indigenous uses.

Other minimal uses: Areas which have minimal use for most of the time but may have specific uses from time to time. Subclasses include Defence lands used for military exercises, stock routes and areas under rehabilitation.

### Production from relatively natural environments

Grazing natural vegetation: Grazing by domestic stock on native vegetation where there has been limited or no deliberate attempt at pasture modification.

Production forestry: Commercial harvesting of forest products from native forests.

### Production from dryland agriculture and plantations

Plantation forestry: Land on which plantations of trees or shrubs (native or exotic species) have been established for forest product production or environmental and resource protection purposes. This includes farm forestry; production of oils, wildflowers and firewood; shelter belts; and woody fodder plants such as leucaena.

Cropping: Land under crops including cereals; hay and silage; oil seed; sugar; cotton; and legumes.

Perennial horticulture: Crop plants living for more than two years that are intensively cultivated including fruit trees; tree nuts; vine fruits; shrub nuts, fruits and berries; flowers and bulbs; vegetables and herbs.

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<sup>3</sup> Bureau of Rural Sciences, 2006: *Guidelines for land use mapping in Australia – principles, procedures and definitions*, 3<sup>rd</sup> edition, Bureau of Rural Sciences, Canberra.

Seasonal horticulture: Crop plants living for less than two years that are intensively cultivated including fruits; nuts; flowers and bulbs; vegetables and herbs.

Land in transition: Areas that had been formerly used but are now abandoned or under rehabilitation.

### **Production from irrigated agriculture or plantations**

Irrigated forestry plantations: As for the dryland forest plantations but on land under irrigation.

Irrigated modified pasture: Irrigated pasture production, both annual and perennial, based on a significant degree of modification or replacement of the native vegetation.

Irrigated cropping: Land under irrigated cropping including cereals; hay and silage; oil seed; sugar; cotton; and legumes.

Irrigated perennial horticulture: Irrigated crop plants living for more than two years that are intensively cultivated including fruit trees; tree nuts; vine fruits; shrub nuts, fruits and berries; flowers and bulbs; vegetables and herbs.

Irrigated seasonal horticulture: Irrigated crop plants living for less than two years that are intensively cultivated including fruits; nuts; flowers and bulbs; vegetables and herbs.

Irrigated land in transition: Irrigated areas that had been formerly used but are now abandoned or under rehabilitation.

### **Intensive uses**

Intensive horticulture: Intensive forms of crop production involving greenhouses, glasshouses or hydroponic production.

Intensive animal production: Intensive forms of animal production involving activities such as dairying, cattle feed lots, piggeries, poultry and aquaculture.

Manufacturing: Factories, workshops, foundries, construction sites, etc. This includes the processing of primary produce (e.g. sawmills, pulp mills, abattoirs).

Residential: All forms of residential development including housing, flats, rural residential and rural living forms.

Services: Land allocated to the provision of commercial or public services, including shops, supermarkets, schools, sporting facilities, emergency and defence facilities.

Utilities: Land used for power generation and distribution and land used for gas treatment, storage and distribution.

Transport and communications: Land used for airports/airfields, roads, railways, ports and navigation facilities.

Mining: Land used for mining, quarrying and for storage of tailings.

Waste treatment and disposal: Land used for the disposal or storage of wastes including landfills, incinerators, sewage and storm water.

## **Water**

Natural bodies of water such as lakes, lagoons and rivers are normally regarded as land cover, rather than land use however bodies of water such as water supply reservoirs and irrigation infrastructure can be regarded as land use.