Glossary of British Sea Ice Terms

	Definition										
Date	1821	1845	1901	1919	1930	1936	1950	1963	1969	1977	1995
Reference	William Scoresby: An Account of the Arctic Regions and a Description of the Northern Whale Fishery	Elisha Kent Kane: Arctic Exploration in the years 1853, '54 and '55.	George Murray FRS: The Antarctic Manual	J.M. Wordie: South	Marine Observers Handbook: 5th Edition	Marine Observers Handbook: 6th Edition	Marine Observers Handbook: 7th Edition	Marine Observers Handbook: 8th Edition	Marine Observers Handbook: 9th Edition	Marine Observers Handbook: 10th Edition	Marine Observers Handbook: 11th Edition
Field	A sheet of ice so extensive, that its limits cannot be discerned from a ship's mast head.	An extensive surface of floating ice.	A sheet of ice of such extent that its termination cannot be seen from the crows nest.	A sheet of ice of such extent that its limits cannot be seen from the masthead	An area of pack ice of such extent that its limits cannot be seen from a ships mast head	An area of pack ice of such extent that its limits cannot be seen from a ships mast head	A area of pack ice consisting of very large floes several miles across, of such extent its limits cannot be seen from the mast head.	Area of pack ice/drift ice, consisting of any size of floes, of such an extent that its limits cannot be seen from the crows nest.	Area of pack ice consisting of any size of floes, which is greater than 10km (6 miles) across. May be designated as: Large- over 20km (12 miles) across, Medium - 15-20km (9-12miles) across, Small - 10-15km (6-9 miles) across.	Area of pack ice consisting of any size of floes, which is greater than 5.4 n. mile across (cf. ice patch). See Large, Medium, Small ice-field.	Area of floating ice consisting of any size of floes, which is greater than 10 cm across (cf. patch).
Floe	Similar to a Field, but smaller; in as much as its extent can be seen. This term, however, is seldom applied to pieces of ice of less diameter than half a mile or a mile	A detachted portion of a field.	The same as a field, except its limits can be made out from the crows nest.	An area of ice, level or hummocked, whose limits are within sight. Includes all sizes between brash on the one hand and fields on the other. Light floes are between 1 and 2 feet in thickness (anything thinner being young ice). Those exceeding 2 feet in thickness are generally termed heavy floes, being generally hummocked, and in the Antarctic, at any rate, coverd by fairly deep snow.	An area of ice other than fast ice whose limits are within sight.	An area of ice other than fast ice whose limits are within sight.	A piece of sea ice other than fast ice, large or small. **Light floes** are anything up to 2-3ft in thickness; floes of greater thickness, both level and hummocked, are called **Heavy Floes**.	A single piece of sea ice, other than fast ice, large or small, described if possible as **Light** or **Heavy** according to thickness. ***Vast:*** over 10km (5.5miles) across, ***Big*** : 1-10km (0.5 - 5.5miles) across, ***Medium*** : 200-1000m (660ft-0.5miles) across, ***Small*** : 10-200m (33-660ft) across.	Any relatively flat piece of sea ice 20m (66ft) or more across. Floes are subdivided according to horizontal extent as follows: Giant: over 10km (6miles) across, Vast: 2-10km (1-6miles) across, Big: 500-2000m (1/4 to 1mile) across, Medium: 100-500m (330ft to 1/4mile) across, Small: 20-100m (66-330ft) across.	Any relatively flat piece of sea ice 20 m or more across. Floes are sub- divided according to horizontal extent as follows : GIANT: Over 5.4 n. mile across. VAST: 1.5 -5.4 n. mile across. BIG: 500-2000 m across. MEDIUM: 100-500 m across. SMALL: 20-100 m across.	Any relatively flat piece of sea ice 20 m or more across. Floes are subdivided according to horizontal extent as follows: GIANT: Over 10 km across. VAST: 2-10 km across. B1G: 500-2000 m across. MEDIUM: 100-500 m across. SMALL: 20-100m across.
Drift Ice	Consists of pieces less than Floes, of various shapes and magnitudes	Detached Ice in motion.	Pieces smaller than a floe.	Loose open ice, where the area of water exceeds that of ice. Generally drift ice is within reach of the swell, and is a stage in the breaking down of pack ice, the size of the floes being much smaller than the latter (Scoresby's use of the term drift ice for pieces of ice intermediate in size between floes and brash has, however, quite died out). The Antarctic and Arctic Pack ice usually has a girdle or fringe of Drift ice.	Loose very open pack where water predominates over ice	Loose very open pack where water predominates over ice	Loose, very open pack, where water predominates over ice. Vessels can usually proceed at full or moderate speed with little alteration of course. The floes are in most cases smaller or lighter than those in close or open pack, and often associated with rotten ice and brash. A term formerly much in use, but liable to confusion with '**drivis**', the Norwegian equivalent of pack ice	Term used in a wide sense to include any area of sea ice, other than fast ice, no matter what form it takes or how disposed.				Term used in a wide sense to include any area of sea ice, other than fast ice, no matter what form it takes or how it is disposed. When concentrations are high, i.e. 7/10 or more, drift ice may be replaced by the term pack ice.
Brash Ice	Smaller still than Drift ice, consisting of roundish nodules, and fragments of ice, broken off by the attrition of one piece against another. This may be considered as the wreck of other kinds of ice	Ice broken up into small pieces.	Small fragments and nodules, the wreck of other kinds of ice.	Small fragments and roundish nodules; the wreck of other kinds of ice.	Small fragments and rounded nodules, the wreck of other kinds of ice	Small fragments and rounded nodules, the wreck of other kinds of ice	Small fragments, not more than 6 feet across, the wreckage of other forms of ice. Also ice in a waterlogged state and appearing of darker tone. The American equivalent is generally 'Mush'. In appearance not unlike 'sludge' or 'slush', but brash fragments are of widley varying size	Accumulation of small fragments not more than 2m (6.5 feet) across, the wreckage of other forms of ice.	Accumulations of Floating ice made up of fragments not more than 2m (6.5ft) accross, the wreckage of other forms of ice.	Accumulations of floating ice made up of fragments not more than 2 m across, the wreckage of other forms of ice.	Accumulations of floating ice made up of fragments not more than 2 m across, the wreckage of other forms of ice.

Bay Ice	Is newly formed on the sea. Bay ice may be said to extend from the first pellicle of ice, up to a foot in thickness [Consists of 2 categorys, below:]	Ice of recent formation, so called because forming most readily in bays and sheltered spots.	The young ice which first forms on the surface of the sea in autumn.				Term formerly in use for newly formed 'level ice', of sufficient thickness to impede or prevent navigation. Preferred alternative terms are: level, winter or fjord ice. Has been used to describe heavy land floes in the Antarctic	Level ice of more than one winter's growth, which has remained unhummocked and also becomes nourished by surface layers of snow. Thickness of ice and snow up to about 2 metres (6.5 feet) above sea level.			
Common [Bay Ice]	Smooth extensive sheets										
Pancake [Bay Ice]	Small circular pieces with raised edges		Ice consists of small circular pieces with raised edges. In a ruffled sea the pieces of bay ice strike each other on every side, and so become rounded with the edges turned up.	Small circular floes with raised rims; due to the break up in a gently ruffled sea of newly formed ice into pieces which strike against each other, and so form turned up edges.	Small floes of new ice approximately circular and with raised rims	Small floes of new ice approximately circular and with raised rims	Pieces of newly formed ice, approximately circular, about 1-6 feet across, and with raised rims, due to pieces striking against each other.	Pieces of newly formed ice, usually approximately circular, about 30cm to 3m (1-10ft) across, and with raised rims, due to the pieces striking against each other, as the result of wind and swell.	Predominantly circular pieces of ice from 30cm - 3 m (1-10 feet) in diameter, and up to about 10 cm (4 inches) in thickness, with raised rims due to the pieces striking against one another. It may be formed on a slight swell from Grease Ice, Shuga or Slush or as a result of the breaking of ice Rind, Nilas or, under severe conditions of swell or waves, of Grey Ice It also sometimes forms at some depth, at an interface between water bodies of different physical characteristics, from where it floats to the surface; its appearance may rapidly cover wide areas of water.	Predominantly circular pieces of ice from 30 cm to 3 m in diameter, and up to about 10 cm in thickness, with raised rims due to the pieces striking against one another. It may be formed on a slight swell from grease ice, shuga or slush or as a result of the breaking of ice rind, nilas or, under severe conditions of swell or waves, of grey ice. It also sometimes forms at some depth at an interface between water bodies of different physical characteristics, from where it floats to the surface; its appearance may rapidly cover wide areas of water.	Predominantly circular pieces of ice from 30 cm-3 m in diameter and up to about 10 cm in thickness, with raised rims due to the pieces striking against one another. It may be formed on a slight swell from grease ice, shuga or slush or as a result of the breaking of ice rind, nilas or under severe conditions of swell or waves, of grey ice. It also sometimes forms at some depth at an interface between water bodies of different physical characteristics, from where it floats to the surface, its appearance may rapidly cover wide areas of water.
Sludge	Consists of a stratum of detached ice-crystals, or of snow, or of the smaller fragments of Brash-ice floating on the surface of the sea. This generally forms the rudiments of ice, when the sea is in agitation		Small pieces of brash ice saturated by the salt water	The initial stages in the freezing of sea water, when its consistency becomes gluey or soupy. The term is also used (but not commonly) for brash ice still further broken down.	The initial stages in the freezing of sea water when it is of gluey or soupy consistency. The term is also occasionally used for Brash Ice still further broken down.	The initial stages in the freezing of sea water when it is of gluey or soupy consistency. The term is also occasionally used for Brash Ice still further broken down.	Also termed '**Slush**'. The initial stages in the freezing of sea water, when it assumes a greasy appearance, and a scum of ice crystals is formed on the surface.	Spongy whitish ice lumps, a few cm (1-2") across; they are formed of **Slush,** of snow slush and sometimes of spongy ice lumps formed on the bottom of the sea and emerging to the surface.			

Hummock	A protuberance raised upon any plane of ice above the common level. It is frequently produced by pressure, where one piece is squeezed upon another, often set upon its edge, and in that position cemented by frost. Hummocks are likewise formed, by pieces of ice mutually crushing each other, the wreck being heaped upon one or both of them. To Hummocks, principally, the ice is indebted for its variety of fanciful shapes, and its picturesque appearance. They occur in great numbers in heavy packs, on the edges and occasionally in the middle of fields and floes, where they often attain the height of 30ft or upwards	Rdiges of broken ice formed by collision of fields.	A rough hillock of ice, whether formed by seracs, pressure ridges, or otherwise.		(ing) The results of pressure upon the ice	(ing) The results of pressure upon the ice	A ridge or hillock of sea ice due to rafting and pressure	Ice pieces piled over one another on a rather smooth ice surface.	A hillock of broken ice which has been forced upward by pressure. May be fresh or weathered. The submerged volume of broken ice under the Hummock, forced downwards by pressure, is termed a Bummock.	A hillock of broken ice which has been forced upwards by pressure. May be fresh of weathered. The submerged volume of broken ice under the hummock, forced downwards by pressure, is termed a bummock.	A hillock of broken ice which has been forced upwards by pressure. May be fresh or weathered. The submerged volume of broken ice under the hummock, forced downwards by pressure, is termed a bummock.
Calf	A portion of ice which has been depressed by the means as a hummock is elevated. It is kept down by some larger mass; from beneath which, it shows itself on one side	Detached masses from a berg or glacier, rising suddenly to the surface.	A mass of ice lying under a floe near its margin, and when disengaged from that portion, rising with violence to the surface.								
Tongue	A point of ice projecting nearly horizontally from a part that is under water		A mass of ice projecting under water from a floe or an iceberg, and gernerally distinguishable at a considerable depth in smooth water. It differs from a calf in being fixed to and forming part of a larger body.				A long, narrow tongue of ice, attached to the shore at one end, found in the Antarctic. An ice tongue may be many miles in length.	A projection of the ice edge up to several km (miles) in length, caused by wind or current.		A projection of the ice edge up to several nautical miles in length, caused by wind or current.	A projection of the ice edge up to several kilometres in length, caused by wind or current.
Pack	A body of drift ice of such magnitude, that its extent is not discernible [consists of 2 parts, below:]	A large area of floating ices driven together more or less closely.	A body of drift ice consisting of different pieces, and the extent of which cannot be seen	The Pack: Term very often used in a wide sense to include any area of sea ice, no matter what form it takes or how disposed. The french term is banquise de derive. Pack ice: A more restricted use than the above, to include hummocky floes or close areas of young ice and light floes. Pack ice is 'close' or 'tight' if the floes constituting it are in contact; 'open' if, for the most part, they do not touch. In both cases it hinders, but does not necessarily check, navigation.	**Pack**: The term used to denote the main belt of derived ice which in the Antarctic girdles the continent south of the zone of the 'westerlies' and in the Arctic fills the Polar sea and escapes southward from the outlets of the sea. **Pack ice**: Sea ice which has drifted from its original position	**Pack**: The term used to denote the main belt of derived ice which in the Antarctic girdles the continent south of the zone of the 'westerlies' and in the Arctic fills the Polar sea and escapes southward from the outlets of the sea. **Pack ice**: Sea ice which has drifted from its original position	Term used in a wide sense to include any area of sea ice, other than fast ice, no matter what form it takes or how disposed.	Term used in a wide sense to include any area of sea ice, other than fast ice, no matter what form it takes or how disposed.	Term used in a wide sense to include any area of Sea Ice other than Fast Ice, no matter what form it takes or how it is disposed.	Term used in a wide sense to include any area of sea ice, other than fast ice no matter what form it takes or how it is disposed.	

Open	A pack is said to be 'open', when the pieces of ice, though very near each other, do not generally touch		Open pack: When te pieces do not touch		The floes for the most part do not touch	The floes for the most part do not touch	Floes seldom in contact and with many leads and pools, so navigation is comparatively easy for ordinary vessels.	Water preponderates over ice, Ice cover 1/10 - 3/10			Floating ice in which the ice concentration is 4/10 to 6/10, with many leads and polynyas, and the floes are generally not in contact with one another.
Close	A pack is said to be 'close', when the pieces are in complete contact		Close pack: When the pieces are pressed together		Pack composed of floes mainly in contact	Pack composed of floes mainly in contact	Pack composed of floes, mostly in contact, such that navigation becomes difficult except for specially constructed ships.	Composed of floes mostly in contact. Ice cover 7/10-9/10 or 6/8 to 7/8.	Pack ice in which the concentration is 7/10 to 8/10 (6/8 to less than 7/8), composed of floes mostly in contact.		Floating ice in which the concentration is 7/10 to 8/10, composed of floes mostly in contact.
Patch	A colection of drift or bay ice of a circular or polygonal form. In point of magnitude, a pack corresponds with a field, and a patch with a floe		A collection of drift ice, the limits are visible, in contradistinction to pack ice					A collection of Pack ice/Drift ice, less than 10km (5.5miles) across, the limits of which are visible from the crows nest.	An area of pack ice less than 10km (6 miles) across.	An area of pack. ice less than 5.4 n. mile across.	An area of floating ice less than 10 km across.
Stream	An oblong collection of drift or bay ice, the pieces of which are continuous		A drifting line of loose ice				An isolated strip of brash or pack ice pressed together by wind, swell or tide.	Long narrow area of Pack ice/Drift ice, about 1km (0.5miles) or less in width, usually composed of small fragments detached from the main mass of ice, and run together under the influence of wind, swell, or current. Also termed: **Strip** or **String.**	Part of an inland ice sheet in which the ice flows more rapidly and not necessarily in the same direction as the surrounding ice. The margins are sometimes clearly marked by a change in direction of the surface slope but my be indistinct.	Part of an inland ice sheet in which the ice flows more rapidly and are sometimes clearly marked by a change in direction of the surface slope but may be indistinct.	Part of an inland ice sheet in which the ice flows more rapidly and not necessarily in the same direction as the surrounding ice. The margins are sometimes clearly marked by a change in direction of the surface slope but may be indistinct.
Sea-Stream	It is called a 'sea-stream', when it is exposed on one side to the ocean, and affords shelter from the sea, to whatever is within it										
Open (Sailing) Ice	Is where the pieces are so separate as to admit of a ship sailing conveniently among them		Ice of which the pieces are separted as to allow of a ship sailing among them.								
Light	Term attached to other ice form, from a foot to a yard in thickness				**Light Floes**: floes up to 2 feet in thickness	**Light Floes**: floes up to 2 feet in thickness					
Heavy	Term attachted to other ice form, from about a yard upwards				**Heavy Floes**: floes over 2 feet in thickness	**Heavy Floes**: floes over 2 feet in thickness					
Land Ice	Consists of Drift ice that is attached to the shore; or Drift ice, which, by being covered with mud of gravel, appears to have recently been in contact with the shore; or the flat ice, resting on the land, not having the appearance or elevation of ice bergs	Floes or Fields adhering to the coast or included between headlands.	Ice attached to the land, either in floes or in heavy grounded masses lying near the shore.								
Ice Berg (mountain, Island)	A large insulated peak of floating ice; or a glacier, occupy a ravine or valley, generally opening towards the sea	A large floating mass of ice detached from a glacier.	A mass of land ice, broken from a glacier and floating in the sea.		A large mass of glacier ice	A large mass of glacier ice	A large mass of floating ice, broken from a glacier	Large mass of floating or stranded ice, more than 5 metres (16 feet) above sea level, which has broken away either from a glacier or from an ice shelf formation. Sub divisions are Glacier/Tabular and Barrier berg. **Ice Island**: Drifting portion which has separated off from an ice shelf.	A massive piece of ice of greatly varying shape, more than 5m (16ft) above sea level, which has broken away from a Glacier, and which may be afloat or aground. Icebergs may be described as tabular, dome shaped, sloping, pinnacled, weathered or Glacier Bergs.	A massive piece of ice greatly varying in shape, more than 5 m above sea level, which has broken away from a glacier, and which may be afloat or aground. Icebergs may be described as tabular, dome-shaped, sloping, pinnacled, weathered or glacier bergs.	A massive piece of ice of greatly varying shape, protruding more than 5 m above sea level, which has broken away from a glacier, and which may be afloat or aground. Icebergs may be described as tabular, dome-shaped, sloping, pinnacled, weathered or glacier bergs.

Bight	A bay in the outline of the ice	An indentation.	An indentation in a floe of ice.					An inward bend of the ice edge, formed either by wind or current.		An extensive crescent-shaped indentation in the ice edge, formed by either wind or current.	An extensive cresent-shaped indentation in the ice edge, formed by either wind or current.
Lane/Lead (vein)	A narrow channel of water in the packs, or other large collections of ice	A navigable opening in the ice.	A lane or channel of open water through the ice.	When a crack opens out to such a width as to be navigable. In the Antarctic it is customary to speak of these as leads, even when frozen over to constitute areas of young ice.	A navigable passage through pack ice. Also termed **Lead**	A navigable passage through pack ice. Also termed **Lead**	A navigable passage through pack ice; a lead may still be so named even if covered in young ice. Also termed **Lead**.	A navigable passage through pack ice/drift ice.	Any fracture or passage way through sea ice which is navigable by surface vessels.	Any fracture or passage-way through sea ice which is navigable by surface vessels.	Any fracture or passageway through sea ice which is navigable by surface vessels.
Slush					The initial stages in the freezing of sea water when it is of gluey or soupy consistency. The term is also occasionally used for Brash Ice still further broken down.	The initial stages in the freezing of sea water when it is of gluey or soupy consistency. The term is also occasionally used for Brash Ice still further broken down.	See **Sludge**.	An accumulation on the surface of the water of ice needles frozen together; it forms patches or a thin compact layer of a greyish or leaden-tinted colour. The surface of the sea covered with ice slush has a dim tint.		Snow which is saturated and mixed with water on land or ice surfaces, or as a viscous floating mass in water after a heavy snowfall.	Snow which is saturated and mixed with water on land or ice surfaces, or as a viscous floating mass in water after a heavy snowfall.
Hummocky Floes				The most suitable term for what has also been called 'old pack' and 'screwed pack' by David, and Schollenеis by German writers. In contrast to young ice, the structure is no longer fibrous, but becomes spotted or bubbly, a certain percentage of salt drains away, and the ice becomes almost translucent.	Floes composed wholly or partly of recemented pressure ice	Floes composed wholly or partly of recemented pressure ice					
Bergy Bit				Pieces, about the size of a cottage, of glacier ice or of hummocky pack washed clear of snow.	Medium sized pieces of glacier ice or of heavy floes or hummocky-pack washed clear of snow (typical bergy bits have been described as about the size of a cottage)	Medium sized pieces of glacier ice or of heavy floes or hummocky-pack washed clear of snow (typical bergy bits have been described as about the size of a cottage)	Medium sized pieces of glacier ice, which may originate either from a glacier or from disrupted hummocky ice. (typical bergy bits have been described as about the size of a cottage)	A medium sized piece of ice, generally less than 5m (16 feet) above sea level and about the size of a small cottage, mainly originating from glacier ice, but occassionally a massive piece of sea ice or disrupted hummocked ice. When the sea ice origin is not in doubt the term Floeberg may be used.	A large piece of floating glacier ice, generally showing less than 5m above sea level (but more than 1m/3ft) and normally about 100-300m² (120-360 square yards) in area	A large piece of floating glacier ice, generally showing less than 5 m above sea level (but more than 1m) and normally 100-300m² in area.	A large piece of floating glacier ice, generally showing less than 5m above sea-level but more than 1m and normally about 100-300m2 in area.
Growler				Still smaller pieces of sea ice than the above. Greenish in colour, and barely showing above the water level.	Similar pieces of ice to bergy bits, but so small as barely to show above sea level	Similar pieces of ice to bergy bits, but so small as barely to show above sea level	A piece of ice almost awash, smaller than a bergy bit, and appearing greenish in colour	Smaller piece of ice than a Bergy Bit, frequently appearing greenish in colour and barely showing above the water. May originate both from sea ice and from glacier ice.	Smaller piece of ice than a Bergy Bit or Floeberg, often transparent but appearing green or almost black in colour, extending less than 1m (3ft) above the sea surface and normally occupying an area of about 20m² (24 square yards).	Smaller piece of ice than a bergy bit or floeberg, often transparent but appearing green or almost black in colour, extending less than 1 m above the sea surface and normally occupying an area of about 20 m2.	Smaller piece of ice than a bergy bit or floeberg, often transparent but appearing green or almost black in colour, extending less than l m above the sea surface and normally occupying an area of about 20 m2.
Rotten Ice			Old ice, partially melted, and inpart honeycombed		Floes which have become much honey-combed in course of melting, or which appear black through saturation with water	Floes which have become much honey-combed in course of melting, or which appear black through saturation with water	Floes which have become much honeycombed in the process of melting.	Ice which has become honeycombed in the course of melting and which is an advanced state of disintegration.	Sea Ice which has become honeycombed and which is in an advanced state of disintegration.	Sea ice which has become honeycombed and which is in an advanced state of disintegration.	Sea ice which has become honeycombed and which is in an advanced state of disintegration.

Level Ice					All unhummocked ice, no matter what age or thickness, which has platy structure and fibrous appearance when broken	All unhummocked ice, no matter what age or thickness, which has platy structure and fibrous appearance when broken	All unhummocked ice, no matter what age or thickness. In the early stages it is more usually termed '**Young ice**'.	Ice with a flat surface, which has never been hummocked; typical with regard to bays, gulfs, straits, archipelagoes and shallow waters, where ice formation occurs in undisturbed conditions.			Sea ice which has not been affected by deformation.
Fast Ice					Sea ice while remaining fast in the position of growth. True Fast ice is only met along coasts where it is attachted to the shore or over shoals where it may be held in position by islands or stranded ice bergs	Sea ice while remaining fast in the position of growth. True Fast ice is only met along coasts where it is attachted to the shore or over shoals where it may be held in position by islands or stranded ice bergs	Also termed '**Landfast ice**'. Sea ice of widely varying width, which remains fast along the coast in the position of growth, and which may attain a thickness considerably above the average. When thick ice of this nature breaks off and drifts away if forms '**land floes**'.	Sea ice which remains fast, generally in the position where originally formed, and which may attain a considerable thickness. It is found along coasts where it is attachted to the shore, or over shoals, where it may be held in positions by islands, grounded **icebergs** or grounded **polar ice**	Sea ice which forms and remains fast along the coast, where it is attachted to the shore, to an Ice Wall, to an Ice Front, between shoals or grounded Ice Bergs. Vertical fluctuations may be observed during changes of sea level. Fast ice may be formed in situ from sea water or by freezing of Pack ice of any age to the shore, and it may extend a few metres/yards or several hundred km/miles from the coast. Fast ice may be more than one year old and may then be prefixed with the appropriate age category (Old, Second Year, Multi Year). If it is thicker than 2m (6.5ft) above sea level it is called an Ice Shelf.	Sea ice which forms and remains fast along the coast, where it is attached to the shore, to an ice wall, to an ice front, between shoals or grounded icebergs. Vertical fluctuations may be observed during changes of sea level. Fast ice may be formed in situ from sea water or by freezing of pack ice of any age to the shore, and it may extend a few metres or several hundred kilometers from the coast. Fast ice may be more than one year old and may then be prefixed with the appropriate age category (old, second-year or multi-year). If it is thicker than about 2 m above sea level it is called an ice shelf.	Sea ice which forms and remains fast along the coast, where it is attached to the shore, to an ice wall, to an ice front, between shoals or grounded icebergs. Vertical fluctuations may be observed during changes of sea level. Fast ice may be formed in situ from sea water or by freezing of floating ice of any age to the shore, and it may extend a few metres or several hundred kilometers from the coast.Fast ice may be more than one year old and may then be prefixed with the appropriate age category (old, second-year, or multi-year). If it is thicker than about 2 m above sea level it is called an ice shelf.
Crack				Any sort of fracture or rift in the sea ice covering.	Any fracture or rift in sea ice	Any fracture or rift in sea ice		Any fracture or rift in sea ice not sufficiently wide to be described as a lead/lane. It is usually possible to jump across a crack.	A Fracture which has not parted.	Any fracture which has	Any fracture of fast ice, consolidated ice or a single floe which may have been followed by separation ranging from a few
Anchor Ice			Ground Ice				All submerged ice attachted to the bottom irrespective of the nature of its formation	Ice found attached or anchored to the bottom. Also termed '**Ground Ice**'	Submerged ice attached or anchored to the bottom, irrespective of the nature of its formation.	Submerged ice attached or anchored to the bottom, irrespective of the nature of its formation.	Submerged ice attached or anchored to the bottom, irrespective of the nature of its formation.
Barrier (Shelf) Ice			The edge of great Antarctic glaciers which enter the sea but remain attachted to the land.				A form of land ice or land ice afloat in the Antarctic, produced by an accumulation of horizontal layers of snow which has reached the intermediate opaque 'neve' or 'firn' stage before passing into true glacier ice. Portions of the barrier break off to form tabular bergs				
Black Ice							Thin dark looking ice with no snow on it. A variety of young ice				
Consolidated (Pack Ice)							The heaviest form of Pack ice, other than heavy Polar ice, no leads or lanes. Quite unnavigable.		Pack ice in which the concentration is 10/10 (8/8) and the floes are frozen together.	Pack ice in which the concentration is 10/10 (8/8) and the floes are frozen together.	
Fjord Ice							Term used by Scandinavians for level ice originating in fjords.	Term used by Scandinavians for level ice originating in fjords.			

Floeberg			Large masses if sea ice, broken off from ancient floes of great thickness, when they are forced upon the shore.				A massive piece of sea ice or hummock (a berg in appearance but a floe in origin)	See **Bergy Bit**	A massive piece of sea ice composed of a Hummock, or a group of Hummocks, frozen together and separated from and ice surroundings. It may float up to 5m (16ft) above sea level.	A massive piece of sea ice composed of a hummock, or a group of hummocks, frozen together and separated from any ice surroundings. It may float up to 5 m above sea level.	A massive piece of sea ice composed of a hummock or a group of hummocks, frozen together and separated from any ice surroundings. It may typically protrude up to 5 m above sea level.
Glacier Ice							Any ice originating from land glaciers, whether found on land or floating in the sea as bergs.	Any ice floating on the sea as a berg, which originates from a land glacier.	Ice in, or originating from, a Glacier, whether on land or floating on the sea as Icebergs, Bergy Bits or Growlers.	Ice in, or originating from, a glacier, whether on land or floating on the sea as icebergs, bergy bits or growlers.	Ice in, or originating from, a glacier, whether on land or floating on the sea as icebergs, bergy bits or growlers
Ice Foot		The Danish name for the limited ice-belt of the more southern coast.	Along a coast its caused by the accumulation of the autumn snowfall as it drifts to the beach, being met by sea water. It is at once converted to ice, forming a solid wall from the bottom of the sea, constantly maintained. The upper surface of an ice foot is level with the top if high water. The terrace above this wall, from its edge to the base of the talus, has a width dependant on the land slope.				Ice step attached to the coast, unmoved by tides, and remaining after the fast ice has moved away.	Ice step attached to the coast, unmoved by tides and remaining after the fast ice has been moved away. Several varieties of icefoot can be distinguished.	A narrow fringe of ice attached to the coast, unmoved by tides and remaining after Fast ice has moved away.	A narrow fringe of ice attached to the coast, unmoved by tides and remaining after the fast ice has moved away.	A narrow fringe of ice attached to the coast, unmoved by tides and remaining after the fast ice has moved away.
Land Floe				Heavy but not necessarily hummocked ice, with generally a deep snow covering, which has remained held up in the position of growth by the enclosing nature of some feature of the coast, or by grounded bergs throughout the summer season when most of the ice breaks out. Its thickness is, therefore, above the average. Has been called at various times fast ice, coast ice, land ice, bay ice by Shackleton and David and the Charcot Expedition; and possibly what Drygalski calls Schelfeis is not very different.			See **Fast Ice**				
Landfast Ice							See **Fast Ice**				
Mush							See **Brash Ice**				
Polar Ice							Extremely heavy floes up to 10 feet or more in thickness, of considerable age and great extent, originally very heavily hummocked, but ultimately reduced by weathering to a more or less even surface.	Extremely heavy sea ice, up to 3m (10ft) or more in thickness of more than one winters growth. Heavily hummocked and may ultimately be reduced by weathering to a more or less even surface.			

Tabular Berg							Flat topped ice berg generally broken off from barrier or ice shelf.	A flat topped berg, showing horizontal firn snow/neve layers, usually broken off from an ice shelf formation.	A flat-topped iceberg. Most tabular bergs form by calving from an ice shelf and show horizontal banding (cf. ice island).	A flat-topped iceberg. Most tabular bergs form by calving from an ice shelf and show horizontal banding (cf. ice island).	A flat-topped iceberg. Most tabular bergs form by calving from an ice shelf and show horizontal banding (cf. ice island).
Winter Ice							Term used by the Scandinavians for level ice of one seasons growth.	More or less unbroken level ice of not more than one winters growth, originating from young ice. Thickness from 15cm - 2m (6" to 6.5ft). Completely safe for travelling purposes. Winter ice may be subdivided into **Medium winter ice**: 15-30cm (6-12") thick and **Thick winter ice**: more than 30cm (12") thick.			
Young Ice		Ice formed before the setting in of winter; recent ice.	Nearly the same as bay ice; but applied to the more recently formed	Applied to all unhummocked ice up to about a foot in thickness. Owing to the fibrous or platey structure, the floes crack easily, and where the ice is not over thick a ship under steam cuts a passage without much difficulty. Young ice may originate from the coalescence of pancakes, where the water is ruffled; or else be a sheet of black ice, covered maybe with ice flowers, formed by the freezing of a smooth sheet of water. In the Arctic it has been the custom to call this form of ice bay ice; in the Antarctic however, the latter term is wrongly used for land floes (fast ice etc), and has been so misapplied consistently for 15 years. The term bay			Level ice in its earliest stages, with or without snow cover, comparatively salt and with characteristic crystalline structure. When without snow cover often known as '**Black ice**'.	Newly formed level ice generally in the transition stage of development from ice rind, or pancake ice to winter ice; thickness from 5-15cm (2-6"), as a rule impassable and unsafe for travel either by men or dogs, or in the case of aircraft for ski or wheel landings.	Ice in the transition stage between Nilas and First-year Ice, 10-30 cm (4-12 inches) in thickness. May be sub-divided into Grey Ice and Grey- white Ice.	Ice in the transition stage between nilas and first-year ice, 10-30 cm in thickness. May be subdivided into grey ice and grey-white ice.	Ice in the transition stage between nilas and first-year ice, 10-30 cm
Arctic Pack								Almost salt free ice, having existed over 2 years. Thickness up from 2.5 metres (8 feet). The ice surface is undulating. Its hummocks having melted more than once and are therefore smoothed. In case of absense or insignificant thickness of snow cover, this ice is coloured in different tints of blue.			
Bare Ice								Ice without snow cover.	Ice without snow cover.	Ice without snow cover.	Ice without snow cover.
Barrier Berg								See **Tabular Berg**			
Belt		A continued margin of ice, which in the high northern latitudes adheres to the coast above the ordinary level of the sea.						Long area of pack ice/drift ice from a few kilometers or miles to more than 100km (50 miles) in width.	A large feature of Pack ice arrangement; longer than it is wide; from 1km to more than 100km (62 miles) in width.	A large feature of pack ice arrangement, longer than it is wide, from 1 km to more than 100 km in width.	A large feature of drift ice arrangement; longer than it is wide; from 1km to more than 100km in width.

Dried Ice								Ice surface, from which the water has disappeared after the formation of of cracks and holes. During the period of drying, the surface is whitening.	Sea ice from the surface of which melt water has disappeared after the formation of cracks and thaw holes. During the period of drying the surface area whitens.	Sea ice from the surface of which melt-water has disappeared after the formation of cracks and thaw holes. During the period of drying, the surface whitens.	Sea ice from the surface of which melt water has disappeared after the formation of cracks and thaw holes. During the period of drying, the surface whitens.
Firn Snow/Neve			The upper portion of a glacier, the top layers of which are more nearly in the condition of snow, and in the whole of which much air is mingled with the ice - i.e. It is rather frozen snow, though often hard frozen, than true ice.					Snow which has become coarse grained and compact through temperature changes, forming the transition to Glacier ice.	Old snow which has recrystallized into a dense material. Unlike snow, the particles are to some extent joined together but, unlike ice, the air spaces in it still connect with each other.	Old snow which has re-crystallized into a dense material. Unlike snow, the particles are to some extent joined together; but, unlike ice, the air spaces in it still connect with each other.	Old snow which has re-crystallized into a dense material. Unlike ordinary snow,the particles are to some extent joined together; but unlike ice the air spaces in it still connect with each other.
Glacier Berg								Mass of Glacier ice which has broken away from its parent formation on the coast and generally floats 5m above the sea level.	An irregular shaped Ice Berg.	An irregularly shaped ic	An irregularly shaped iceberg
Glacier Tongue								Projecting seaward extension of glacier, usually afloat. In the Antarctic the extension may be up to many tens of kilometres (50 miles or more).	Projecting seaward extension of glacier, usually afloat. In the Antarctic the extension may be up to many tens of kilometres.	Projecting seaward extension of a glacier, usually afloat. In the Antarctic glacier tongues may extend over many tens of nautical miles.	Projecting seaward extension of a glacier, usually afloat. In the Antarctic, glacier tongues may extend over many tens of kilometers.
Grounded Hummock								Hummocked grounded ice formation. There are single grounded hummocks and lines (or chains) of grounded hummocks.	Hummocked grounded ice formation. There are single grounded hummocks and lines (or chains) of grounded hummocks.	Hummocked grounded ice formation. There are single grounded hummocks and lines (or chains) of grounded hummocks.	Hummocked grounded ice formation. There are single grounded hummocks and lines (or chains) of grounded hummocks.
Ground Ice			Ice formed on the bed of a river, lake or shallow sea, while the water as a whole remains unforzen.					See **Anchor Ice**			
Ice Bar								Ice edge consisting of floes compacted by wind, sea and swell, and difficult to penetrate.			
Ice Breccia / Ice Mosaic								Ice pieces of different age frozen together.	Ice pieces of different age frozen together.	Ice pieces of different age frozen together.	Ice of different stages of development frozen together.
Ice Cake								A floe smaller than 10 metres (33 feet) across. One less than 2 metres (6.5 feet) may be termed a **Small Cake**.	Any relatively flat piece of sea ice less than 20m (66 feet) across. A Small ice cake is less than 2m (6.5 feet).	Any relatively flat piece of sea ice less than 20 m across. See Small Ice Cake	Any relatively flat piece of sea ice less than 20 m across.
Ice Crystals / Frazil Crystals								Fine spicules or plates of ice, suspended in water.	Fine spicules or plates of ice, suspended in water.	Fine spicules or plates of ice, suspended in water.	Fine spicules or plates of ice, suspended in water.
Ice Rind								A thin elastic, shining crust of ice, formed by the freezing of slush or sludge on a quiet sea surface. Thickness less than 5cm (2"). It is easily broken by the wind or swell, and makes a tinkling noise when passed through by a ship.	A brittle, shiny crust of ice formed on a quiet surface by direct freezing or from Grease ice, usually in water of low sanility. Thickness to about 5cm (2 inches). Easily broken by wind or swell, commonly breaking into rectangular pieces.	A brittle shiny crust of ice formed on a quiet surface by direct freezing or from grease ice, usually in water of low salinity. Thickness to about 5 cm. Easily broken by wind or swell, commonly breaking in rectangular pieces.	A brittle shiny crust of ice formed on a quiet surface by direct freezing or from grease ice, usually in water of low salinity. Thickness to about 5 cm. Easily broken by wind or swell, commonly breaking in rectangular pieces.

Ice Shelf								Ice formation over 2m (6.5ft) above sea level with level surface, which originates from annual accumulations of firn snow/neve layers on bay ice (or on the seaward extension of a glacier).	A floating ice sheet of considerable thickness showing 5-50m (6.5ft-164ft) or more above sea level attached to the coast. Usually of great horizontal extent and with a level or gently undulating surface. Nourished by annual snow accumulation and often by the seaward extention of land glaciers. Limited areas may be aground. The seaward edge is termed an ice front.	A floating ice sheet of considerable thickness showing 2-50 m or more above sea level, attached to the coast. Usually of great horizontal extent and with a level or gently undulating surface. Nourished by annual snow accumulation and often also by the seaward extension of land glaciers. Limited areas may be aground. The seaward edge is termed an ice front.	A floating ice sheet of considerable thickness showing 2-50 m or more above sea level attached to the coast. Usually of great horizontal extent and with a level of gently undulating surface. Nourished by annual snow accumulation and often also by the seaward extension of land glaciers. Limited areas may be aground. The seaward edge is termed an ice front
New Ice								A general term which includes Ice Crystals/Frazil Crystals, Slush, Sludge, Pancake ice and Ice-rind.	A general term for recently formed ice which includes Frazil, Grease, Slush and Shuga. These types of ice are composed of ice crystals which are only weakly frozen together (if at all) and have a definate from only while they are afloat.	A general term for recently formed ice which includes frazil ice, grease ice, slush and shuga. These types of ice are composed of ice crystals which are only weakly frozen together (if at all) and have a definite form only while they are afloat.	A general term for recently formed ice which includes frazil ice, grease ice, slush and shuga. These types of ice are composed of ice crystals which are only weakly frozen together (if at all) and have a definite form only while they are afloat.
Polar Fast Ice								Fast ice formed by the grounding and cementing together of polar ice. By the end of the winter it may reach some tens of km (20miles or more) from the coast.			
Polynya		Polynia', A Russian term for an open water space.						Water area enclosed in ice, generally fast; this water area remains constant and has usually an oblong form. Sometimes the Polynya is limited to one side of the coast.	Any non-linear shaped opening enclosed in ice. Polynyas may contain Brash Ice and/or be covered with New Ice, Nilas or Young Ice; submariners refer to these as skylights. Sometimes the polynya is limited on one side by the coast and is called a Shore Polynya or by fast Ice and is called a Flaw Polynya. If it recurs in the same position every year it is called a Recurring Polynya.	Any non-linear shaped opening enclosed in ice. Polynyas may contain brash ice and/or be covered with new ice, nilas or young ice; submariners refer to these as skylights. Sometimes the polynya is limited on one side by the coast and is called a shore polynya or by fast ice and is called a flaw polynya. If it recurs in the same position every year, it is called a recurring polynya.	Any non-linear shaped opening enclosed in ice. Polynyas may contain brash ice and/or be covered with new ice, nilas or young ice.
Pressure Ice/Screw Ice								A general term for ice which has been squeezed together and in places forced upwards. Subdivisions are **Rafted Ice**, **Hummocked Ice** and			
Pressure Ridge								Ridge or wall of hummocked ice where floes have been pressed against each other.			
Rafted Ice								Type of Pressure Ice/Screw Ice formed by one floe over riding another.	Type of Deformed Ice formed by one piece of ice overriding another. (Compare with Finger-Rafting).	Type of deformed ice formed by one piece of ice overriding another (cf. finger rafting).	Type of deformed ice formed by one piece of ice overriding another (cf. finger rafting).

Ram								An underwater ice projection from an iceberg or a hummocked ice floe. Its formation is usually due to a more intensive melting of the unsubmerged part of the floe.	An underwater ice projection from an Ice Wall, Ice Front, Iceberg or Floe. Its formation is usually due to a more intensive melting and erosion of the unsubmerged part.	An underwater ice projection from an ice wall, ice front, iceberg or floe. Its formation is usually due to a more intensive melting and erosion of the unsubmerged part.	An underwater ice projection from an ice wall, ice front, iceberg or floe. Its formation is usually due to a more intensive melting and erosion of the un-submerged part.
Shore Ice								Basic form of Fast ice, representing a compact ice cover attached to the shore and, in shallow waters, also grounded; during changes of sea level vertical fluctuations can be observed. Shore ice can spread in breadth up to several hundreds of km's (200 miles or more).			
Weathered Ice								Hummocked polar ice subjected to weathering which has given the hummocks and pressure ridges a rounded form. If the weathering continues the surface may become more or less even.			
Young Polar Ice								Polar ice which has not melted during the first summer of its existence and which has passed over to the second phase of increase. At the end of the second winter, it attains a thickness up to 2 metres (6.5ft) and more. It differs from ice one year old by a greater portion showing above the surface of the water and also by the hummocks on it being smoother.			
Young Shore Ice								Primary stage of formation of shore ice; it is of local formation (at shore) and usually consists of ice rind or thin young ice; usually some 10 metres (30-35ft) in width, but sometimes even more (100-200			
Compacted Ice Edge									Close, clear cut ice edge compacted by wind or current: usually on the windward side of an area of pack ice.	Close, clear-cut ice edge compacted by wind or current; usually on the windward side of an area of pack ice.	Close, clear-cut ice edge compacted by wind or current; usually on the windward side of an area of drift ice.
Compact Pack Ice									Pack ice in which the concentration is 10/10 (8/8) and no water is visible	Pack ice in which the concentration is 10/10 (8/8) and no water is visible.	
Concentration Boundry									A line approximating the transition between two areas of pack ice with distrinctly different concentrations.	A line approximating the transition between two areas of pack ice with distinctly different concentrations.	A line approximating the transition between two areas of drift ice with distinctly different concentrations

Dark Nilas									Nilas which is under 5cm (2 inches) in thickness and is very dark in colour.	Nilas which is under 5 cm in thickness and is very dark in colour.	Nilas which is under 5cm in thickness and is very dark in colour.
Deformed Ice									A general term for ice which has been squeezed together and in places forced upwards (and downwards). Sub-divisions are Rafted ice, Ridged ice and Hummocked ice.	A general term for ice which has been squeezed together and in places forced upwards (and downwards). Subdivisions are rafted ice, ridged ice and hummocked ice.	A general term for ice which has been squeezed together and in places forced upwards (and downwards). Subdivisions are rafted ice, ridged ice and hummocked ice.
Diffuse Ice Edge									Poorly defined ice edge limiting an area of dispersed ice: usually on the leeward side of an area of pack ice.	Poorly defined ice edge limiting an area of dispersed ice; usually on the leeward side of an area of pack ice.	Poorly defined ice edge limiting an area of dispersed ice; diverging usually on the leeward side of an area of drift ice.
Finger Rafted Ice									Type of Rafted ice in which Floes thrust 'fingers' alternately over and under the other.	Type of rafted ice in which floes thrust 'fingers' alternately over and under the other.	Type of rafted ice in which floes thrust fingers alternately over and under the other
First Year Ice									Sea ice of not more than one winters growth, developing from Young Ice; thickness from 30cm to 2m (1-6.5ft). May be subdivided into Thin First year ice/white ice, Medium First year ice and Thick first year ice.	Sea ice of not more than one winters growth, developing from young ice: thickness 30 cm - 2m. May be subdivided into thin first-year ice/ white ice, medium first-year ice and thick first-year ice.	Sea ice of not more than one winter's growth, developing from young ice; thickness 30 cm -2m. May be subdivided into thin first-year ice/white ice, medium first-year ice and thick first-year ice.
Floating Ice									Any form of ice found floating in water. The principal kinds of Floating ice are Lake ice, River ice, Sea ice, which form by the freezing of water at the surface, and Glacier ice (ice of land origin) formed on land or in an Ice Shelf. The concept includes ice that is stranded or grounded.	Any form of ice found floating in water. The principal kinds of floating ice are lake ice, river ice, and sea ice, which form by the freezing of water at the surface, and glacier ice (ice of land origin) formed on land or in an ice shelf. The concept includes ice that is stranded or grounded.	Any form of ice found floating in water. The principal kinds of floating ice are lake ice, river ice and sea ice, which form by the freezing of water at the surface, and glacier ice (ice of land origin) formed on land or in an ice shelf. The concept includes ice that is stranded or grounded.
Flooded Ice									Sea ice which has been flooded by melt water or river water and is heavily loaded by water and wet snow.	Sea ice which has been flooded by melt-water or river water and is heavily loaded by water and wet snow.	Sea ice which has been flooded by melt water or river water and is heavily loaded by water and wet snow.
Fracture									Any break or rupture through Very Close Pack Ice, Compact Pack Ice, Consolidated Pack Ice, Fast Ice, or a single Floe resulting from deformation processes. Fractures may contain Brash Ice and/or be covered with Nilas and/or Young Ice. Length may vary from a few metres to many kilometres: Large: more than 500m (545yds) wide, Medium: 200-500m (220-545yds) wide, Small: 50-200m (55-220yds) wide, Very Small: 0-50m (up to 55yds) wide.	Any break or rupture through very close pack ice, compact pack ice, consolidated pack ice, fast ice, or a single floe resulting from deformation processes. Fractures may contain brash ice and/or be covered with nilas and/or young ice. Length may vary from a few metres to many nautical miles.	Any break or rupture through very close ice, compact ice, consolidated ice, fast ice, or a single floe resulting from deformation processes. Fractures may contain brash ice and/or be covered with nilas and/or young ice, Length may vary from a few metres to many kilometers. CRACK: 0-1 m wide. VERY SMALL FRACTURE: 1-50 m wide. SMALL FRACTURE: 50-200 m wide. MEDIUM FRACTURE: 200-500 m wide. LARGE FRACTURE more than 500 m wide.

Grease Ice									A later stage of freezing than Frazil ice when the crystals have coagulated to form a soupy layer on the surface. Grease ice reflects little light, giving the sea a matt appearance.	A later stage of freezing than frazil ice when the crystals have coagulated to form a soupy layer on the surface. Grease ice reflects little light, giving the sea a matt appearance.	A later stage of freezing than frazil ice when the crystals have coagulated to form a soupy layer on the surface. Grease ice reflects little light, giving the sea a matt appearance
Grey Ice									Young ice 10-15cm (4-6inches) thick. Less elastic than Nilas and breaks on swell. Usually Rafts under pressure.	Young ice 10-15 cm thick. Less elastic than nilas and breaks on swell.Usually rafts under pressure.	Young ice 10-15 cm thick. Less elastic than nilas and breaks on swell. Usually rafts under pressure.
Grey-White Ice									Young ice 15-30cm (2-12inches) thick. Under pressure more likely to Ridge than Raft.	Young ice 15-30 cm thick. Under pressure more likely to ridge than to raft.	Young ice 15-30 cm thick. Under pressure more likely to ridge.
Grounded Ice									Floating Ice which is aground in shoal water (Compare with Stranded Ice).	Floating ice which is aground in shoal water (cf. stranded ice).	
Iceberg Tongue									A major accumulation of Icebergs projecting from the coast, held in place by grounding and joined together by Fast Ice.	A major accumulation of icebergs projecting from the coast, held in place by grounding and joined together by fast ice.	A major accumulation of icebergs projecting from the coast, held in place by grounding and joined together by fast ice.
Ice Boundary									The demarcation at any given time between Fast Ice and Pack ice or between areas of Pack Ice of difference concentrations (Compare with Ice edge).	The demarcation at any given time between fast ice and pack ice or between areas of pack ice of different concentrations (cf ice edge).	The demarcation at any given time between fast ice and drift ice or between areas of drift ice of different concentrations.
Ice Front									The vertical cliff forming the seaward face of an Ice Shelf or other floating Glacier varying in height from 2-50m (6.5-164ft) or more above sea level.	The vertical cliff forming the seaward face of an ice shelf or other floating glacier varying in height from 2 to 50 m or more above sea level (cf. ice wall).	The vertical cliff forming the seaward face of an ice shelf or other floating glacier varying in height from 2-50 m or more above sea level (cf. ice wall).
Ice Island									A large piece of floating ice about 5m (16 feet) above sea level, broken away from an Arctic ice shelf, having a thickness of 30-50m (98-164ft) and an area of from a few thousand square metres/yards to 500km² (600 sq yards) or more, and usually characterised by a regularly undulating surface which gives it a ribbed appearance from the air.	A large piece of floating ice about 5 m above sea level, which has broken away from an Arctic ice shelf, having a thickness of 30-50 m and an area of from a few thousand square metres to 150 n. mile or more, and usually characterized by a regularly undulating surface which gives it a ribbed appearance from the air.	A large piece of floating ice protruding about 5 m above sea level, which has broken away from an Arctic ice shelf, having a thickness of 30-50 m and an area of from a few thousand square metres to 500 km2 or more, and usually characterized by a regularly undulating surface which gives it a ribbed appearance from the air.
Ice Limit									Climatological term referring to the extreme minimum or extreme maximum extent of the ice edge in any given month or period based on observations over a number of years. Term should be preceded by a minimum or maximum.	Climatological term referring to the extreme minimum or extreme maximum extent of the ice edge in any given month or period based on observations over a number of years. Term should be preceded by minimum or maximum (cf. mean ice edge).	Climatological term referring to the extreme minimum or extreme maximum extent of the ice edge in any given month or period based on observations over a number of years. Term should be preceded by minimum or maximum (cf. mean ice edge).

Ice Massif									A concentration of sea ice covering hundreds of square km/miles, which is find in the same region ever summer.	A concentration of sea ice covering hundreds of nautical mites square, which is found in the same region every summer.	A variable accumulation of close or very close ice covering hundreds of square kilometers which is found in the same region every summer.
Ice of Land Origin									Ice formed on land or in an ice shelf, found floating in water. The concept includes ice that is stranded or grounded.	Ice formed on land or in an ice shelf found floating in water.The concept includes ice that is stranded or grounded.	Ice formed on land or in an ice shelf, found floating in water. The concept includes ice that is stranded or grounded.
Ice Port									An embayment in an ice front, often of a temporary nature, where ships can moor along side and unload directly on to the ice shelf.	An embayment in an ice front, often of a temporary nature, where ships can moor alongside and unload directly on to the ice shelf.	An embayment in an ice front often of a temporary nature, where ships can moor alongside and unload directly onto the ice shelf.
Ice Wall									An ice cliff forming the seaward margin of a glacier which is not afloat. An ice wall aground, the rock basement being at or below sea level.	An ice cliff forming the seaward margin of a glacier which is not afloat. An ice wall is around, the rock basement being at or below sea level (cf. ice front).	An ice cliff forming the seaward margin of a glacier which is not afloat. An ice wall is aground, the rock basement being at or below sea-level (cf. ice front).
Light Nilas									Nilas which is more than 5cm (2 inches) in thickness and rather lighter in colour than Dark Nilas	Nilas which is more than 5 cm in thickness and rather lighter in colour than dark nilas.	Nilas which is more than 5 cm in thickness and rather lighter in colour than dark nilas.
Multi Year Ice									Old ice up to 3m (10 feet) or more thick which has survived at least two summers' melt. Hummocks even smoother than in Second Year Ice, and the ice is almost salt free. Colour, where bare, is usually blue. Melt pattern consists of large interconnecting irregular puddles and a well developed drainage system.	Old ice up to 3 m or more thick which has survived at least two summers' melt. Hummocks even smoother than in second-year ice, and the ice is almost salt-free. Colour, where bare, is usually blue. Melt pattern consists of large interconnecting irregular puddles and a well-developed drainage system.	Old ice up to 3 m or more thick which has survived at least two summers' melt. Hummocks even smoother than in second-year ice. and the ice is almost salt-free. Colour, where bare is usually blue. Melt pattern consists of large interconnecting irregular puddles and a well-developed drainage system.
New Ridge									Ridge newly formed with sharp peaks and slope of sides usually 40̊. Fragments are visible from the air at low altitude.	Ridge newly formed with sharp peaks and slope of sides usually 40 degrees. Fragments are visible from the air at low altitude.	Ridge newly formed with sharp peaks and slope of sides usually 40 degrees. Fragments are visible from the air at low altitude.
Nilas									A thin elastic crust of ice, easily bending on waves and swell and under pressure, thrusting in a pattern of interlocking 'fingers' (finger rafting). Has a matt surface and is up to 10cm (4 inches) in thickness. May be subdivided into Dark Nilas or Light Nilas.	A thin elastic crust of ice, easily bending on waves and swell and under pressure, thrusting in a pattern of interlocking 'fingers' (finger rafting). Has a matt surface and is up to 10 cm in thickness. May be subdivided into dark nilas and light nilas.	A thin elastic crust of ice, easily bending on waves and swell and under pressure, thrusting in a pattern of interlocking 'fingers' (finger rafting). Has a matt surface and is up to 10 cm in thickness. May be subdivided into dark nilas and light nilas.
Old Ice		Ice of more than one seasons growth.							Sea ice which has survived at least one summers melt. Most topographic features are smoother than on First Year Ice. May be subdivided into Second and Multi year ice.	Sea ice which has survived at least one summer's melt. Most topographic features are smoother than on first-year ice. May be subdivided into second-year ice and multi-year ice.	Sea ice which has survived at least one summer's melt; typical thickness up to 3m or more. Most topographic features are smoother than on first-year ice.

Puddle									An accumulation on ice of melt-water, mainly due to melting snow, but in the more advanced stages also to the melting of ice. Initial stage consists of patches of melted snow.	An accumulation on ice of melt-water, mainly due to melting snow, but in the more advance stages also to the melting of ice. Initial stage consists of patches of melted snow.	An accumulation on ice of melt water, mainly due to melting snow, but in the more advanced stages also to the melting of ice. Initial stage consists of patches of melted snow.
Recurring Polynya									A Polynya which recurs in the same position every year.	A polynya which recurs in the same position every year.	A polynya which recurs in the same position every year.
Ridge/d Ice									Ice piled haphazardly one piece over another in the form of ridges or walls. Usually found in First-year Ice	Ice piled haphazardly one piece over another in the form of ridges or wails. Usually found in first-year ice (cf. ridging).	Ice piled haphazardly one piece over another in the form of ridges or walls. Usually found in First-year ice (c.f. ridging).
Ridged Ice Zone									An area in which much Ridged Ice with similar characteristics has formed.	An area in which much ridged ice with similar characteristics has formed.	An area in which ridged ice with similar characteristics has formed.
Sustrugi									Sharp, irregular ridges formed on a snow surface by wind erosion and deposition. On mobile Floating Ice the ridges are parallel to the direction of the prevailing wind at the time they were formed.	Sharp, irregular ridges formed on a snow surface by wind erosion and deposition. On mobile floating ice to ridges are parallel to the direction of the prevailing wind at the time they were formed.	Sharp, irregular ridges formed on a snow surface by wind erosion and deposition. On drift ice the ridges are parallel to the direction of the prevailing wind at the time they were formed.
Second Year Ice									Old Ice which has survived only one summer's melt. Because it is thicker and less dense than First-year Ice, it stands higher out of the water. In contrast to Multi-year Ice, summer melting produces a regular pattern of numerous small Puddles. Bare patches and puddles are usually...	Old ice which has survived only one summer's melt. Because it is thicker and less dense than first-year ice, it stands higher out of the water. In contrast to multi-year ice, summer melting produces a regular pattern of numerous small puddles. Bare patches and puddles are usually greenish-blue.	Old ice which has survived only one summer's melt; typical thickness up to 2.5 m and sometimes more. Because it is thicker than first-year ice, it stands higher out of the water. In contrast to multi-year ice, summer melting produces a regular pattern of numerous small puddles. Bare patches and puddles are usually greenish-blue.
Weathered Ridge									Ridge with peaks slightly rounded and slope of sides usually 30 to 40 degrees. Individual fragments are not discernible	Ridge with peaks slightly rounded and slope of sides usually 30-40 degrees. Individual fragments are not discernible.	Ridge with peaks slightly rounded and slope of side's usually 30-40 degrees. Individual fragments are not discernible.
Young Coastal Ice									The initial stage of Fast Ice formation consisting of Nilas or Young Ice its width varying from a few metres/yards up to 100-200 m (110-220 yards) from the shoreline.	The initial stage of fast ice formation consisting of nilas or young ice, its width varying from a few metes up to 100-200m from the shoreline	The initial stage of fast ice formation consisting of nilas or young ice, its width varying from a few metres up to 100-200 m from the shoreline.
Aged Ridge										Ridge which has undergone considerable weathering. These ridges are best described as undulations.	Ridge which has undergone considerable weathering. These ridges are best described as undulations.

Bergy Water										An area of freely navigable water with no sea ice present but in which ice of land origin is present	An area of freely navigable water in which ice of land origin is present in concentrations less than 1/10. There may be sea ice present, although the total concentration of all ice shall not exceed 1/10.
Close Pack Ice										Pack ice in which the concentration is 7/10 to 8/10 (6/8 to less than 7/8), composed of floes mostly in contact.	
Consolidated Ridge										A ridge in which the base has frozen together.	A ridge in which the base has frozen together.
Fast Ice Boundary										The ice boundary at any given time between fast ice and pack ice.	The ice boundary at any given time between fast ice and drift ice.
Fast Ice Edge										The demarcation at any given time between Fast ice and open water.	The demarcation at any given time between fast ice and open water.
Flaw										A narrow separation zone between pack ice and fast ice, where the pieces of ice are in chaotic state; it forms when pack ice shears under the affect of a strong wind or current along the fast ice boundary (cf. shearing).	A narrow separation zone between drift ice and fast ice, where the pieces of ice are in chaotic state; it forms when drift ice shears under the effect of a strong wind or current along the fast ice boundary (cf. shearing)
Flaw Lead										Passage-way between pack ice and fast ice which is navigable by surface vessels.	A passageway between drift ice and fast ice which is navigable by surface vessels.
Flaw Polynya										A polynya between pack ice and fast ice.	A polynya between drift ice and fast ice.
Glacier		A mass of ice derived from the atmosphere, sometimes abutting upon the sea.	A river of solid ice, descending from its source high in the high neve of a snow field.							A mass of snow and ice continuously moving from higher to lower ground or, if afloat continuously spreading. The principal forms of glacier are: inland ice sheets, ice shelves, ice streams, ice caps, ice piedmonts, cirque glaciers and various types of mountain (valley) glaciers.	A mass of snow and ice continuously moving from higher to lower ground or, if afloat continuously spreading. The principal forms of glacier are: inland ice sheets, ice shelves, ice streams, ice caps, ice piedmonts, cirque glaciers and various types of mountain (valley) glaciers.
Ice Cover										The ratio of an area of ice of any concentration to the total area of sea surface within some large geographic locale; this locale may be global, hemispheric, or prescribed by a specific oceanographic entity such as Baffin Bay or the Barents Sea.	The ratio of an area of ice of any concentration to the total area of sea surface within some large geographic locale; this locale may be global, hemispheric, or prescribed by a specific oceanographic entity such as Baffin Bay or the Barents Sea.

Ice Edge										The demarcation at any given time between the open sea and sea ice of any kind, whether fast or drifting. It may be termed compacted or diffuse (cf. ice boundary).	The demarcation at any given time between the open sea and sea ice of anv kind. whether fast or drifting. It may be termed compacted or diffuse (cf. Ice boundary).
Ice Jam										An accumulation of broken river ice or sea ice caught in a narrow channel.	An accumulation of broken river ice or sea ice caught in a narrow channel.
Large Fracture										More than 500 m wide.	More than 500 m wide.
Large Ice Field										An ice field over 11 n. n	An ice field over 20 km across.
Mean Ice Edge										Average position of the ice edge in any given month or period based on observations over a number of years. Other terms which may be used are mean maximum ice edge and mean minimum ice edge (cf. ice limit).	Average position of the ice edge in any given month or period based on observations over a number of years. Other terms which may be used are mean maximum ice edge and mean minimum ice edge (cf. ice limit).
Medium First Year Ice										First-year ice 70-120 cr	First-year ice 70-120 cm thick.
Medium Fracture										200-500 m wide.	200-500 m wide.
Medium Ice Field										An ice field 8-11 n. mile	An ice field 15-20 km across.
Open Pack Ice										Pack ice in which the ice concentration is 4/10 to 6/10 (3/8 to less than 6/8), with many leads and polynyas, and the floes are generally not in contact with one another.	
Open Water										A large area of freely navigable water in which sea ice is present in concentrations less than 1/10 (1/8). There may be ice of land origin present, although the total concentration of all ice shall not exceed 1/10 (1/8).	A large area of freely navigable water in which sea ice is present in concentrations less than 1/10. No ice of land origin is present.
Ridge										A line or wall of broken ice forced up by pressure. May be fresh or weathered. The submerged volume of broken ice under a ridge, forced downwards by pressure, is termed an ice keel.	A line or wall of broken ice forced up by pressure. May be fresh or weathered. The submerged volume of broken ice under a ridge, forced downwards by pressure, is termed an ice keel.
Sea Ice										Any form of ice found at sea which has originated from the freezing of sea water.	Any form of ice found at sea which has originated from the freezing of sea water.

Shearing										An area of pack ice is subject to shear when the ice motion varies significantly in the direction normal to the motion, subjecting the ice to rotational forces. These forces may result in phenomena similar to a flaw.	An area of drift ice is subject to shear when the ice motion varies significantly in the direction normal to the motion, subjecting the ice to rotational forces. These forces may result in phenomena similar to a flaw (qv).
Shore Lead										A lead between pack ice and the shore or between pack ice and an ice front.	A lead between drift ice and the shore or between drift ice and an ice front.
Shore Polynya										A polynya between pack Ice and the coast or between pack ice and an ice front.	A polynya between drift ice and the coast or between drift ice and an ice front.
Shuga										An accumulation of spongy white ice lumps, a few centimetres across; they are formed from grease ice or slush and somethimes from anchor-ice rising to to surface	An accumulation of spongy white ice lumps, a few centimetres across; they are formed from grease ice or slush and sometimes from anchor ice rising to the surface.
Small Fracture										50-200m wide	50-200 m wide.
Small Ice Cake										An ice cake less than 2	An ice cake less than 2 m across.
Small Ice Field										An ice field 5.4-8 n. mil	An ice field 10-15 km across.
Snow Covered Ice										Ice covered with snow.	Ice covered with snow.
Snowdrift										An accumulation of wind-blown snow deposited in the lee of obstructions or heaped by wind eddies. A cresent-shaped snowdrift, with ends pointing downwind, is known as a snow barchan.	An accumulation of wind-blown snow deposited in the lee of obstructions or heaped by wind eddies. A crescent-shaped snowdrift, with ends pointing down-wind, is known as a snow barchan.
Standing Floe										A separate floe standing vertically or inclined and enclosed by rather smooth ice.	A separate floe standing vertically or inclined and enclosed by rather smooth ice.
Stranded Ice										Ice which has been floating and has been deposited on the shore by retreating high water.	Ice which has been floating and has been deposited on the shore by retreating high water.
Strip										Long narrow area of pack ice, about 0.5 n. mile or less in width, usually composed of small fragments detached from the main mass of ice, and run together under the influence of wind, swell or current.	Long narrow area of floating ice, about l km or less in width, usually composed of small fragments detached from the main mass of ice, and run together under the influence of wind, swell or current.
Thaw Holes										Vertical holes in sea ice formed when surface puddles melt through to the underlying water.	Vertical holes in sea ice formed when surface puddles melt through to the underlying water.
Thick First Year Ice										First-year ice over 120	First-year ice over 120 cm thick.
Thin First Year Ice										First-year ice 30-70 cm	First-year ice 30-70 cm thick.

Tide Crack										Crack at the line of junction between an immovable ice foot or ice wall and fast ice. The latter subject to rise and fall of the tide.	Crack at the line of junction between an immovable ice foot or ice wall and fast ice, the latter subject to rise and fall of the tide.
Very Close Pack Ice										Pack ice in which the concentration is 9/10 to less than 10/10 (7/8 to less than 8/8	
Very Open Pack Ice										Pack ice in which the concentration is 1/10 to 3/10 (1/8 to less than 3/8) and water preponderates over ice.	
Very Small Fracture										0-50 m wide	1-50 m wide.
Very Weathered Ridge										Ridge with tops very rounded, slopes of sides usually 20-30 degrees.	Ridge with tops very rounded, slope of sides usually 20-30 degrees.
White Ice										See thin first-year ice	See Thin first-year ice.
Compacted Ice											Floating ice in which the concentration is 10/10 and no water is visible.
Consolidated Ice											Floating ice in which the concentration is 10/10 and the floes are frozen together.
Floebit											A relatively small piece of sea ice, normally not more than 10 m across composed of hummocks or parts of ridges frozen together and separated from any surroundings. It typically protrudes up to 2 m above sea level.
Ice Isthmus											A narrow connection between two ice areas of very close or compact ice. It may be difficult to pass, whilst sometimes being part of a recommended route.
Jammed Brash Barrier											A strip or narrow belt of new, young or brash ice (usually 100-5000 m wide) formed at the edge of either drift or fast ice or at the shore. It is heavily compacted mostly due to wind action and may extend 2-20 m below the surface but does not normally have appreciable topography. Jammed brash barrier may disperse with changing winds but can also consolidate to form a strip of unusually thick ice in comparison with the surrounding drift ice.

Rubble Field											An area of extremely deformed sea ice of unusual thickness formed during the winter by the motion of drift ice against, or around a protruding rock, islet or other obstruction.
Shear Ridge											An ice ridge formation which develops when one ice feature is grinding past another. This type of ridge is more linear than those caused by pressure alone.
Shear Ridge Field											Many shear ridges side by side.
Shore Ice Ride Up											A process by which ice is pushed ashore as a slab.
Shore Melt											Open water between the shore and the fast ice, formed by melting and/or as a result of river discharge.
Thin First Year Ice First Stage ce foot											30-50 cm thick.
											50-70 cm thick.
Very Close Ice											Floating ice in which the concentration is 9/10 to less than 10/10.
Very Open Ice											Floating ice in which the concentration is 1/10 to 3/10 and water preponderates over ice.
Dock		An opening in the ice, artifical or natural, offering protection.									
Ice Face		The abutting face of the ice belt.									
Ice Raft		Ice, whether field, floe, or detached belt, transporting foreign matter.									
Ice Table		A flat surface of ice.									
Bay Floe			A floe newly formed.								
Chinese Walls			The continuous cliff in which some glaciers or ice sheets terminate when their bases are washed by the sea.								

Penknife ice			Described by Parry in his attempt to go north from Spitzbergen in 1827. In drained off pools on the ice a columnar structure is left, the columns being 6 inches high, increasing in July to 18 inches. When stratification of snow covering a floe is exposed by a newly formed formed crack, the lower portion granulates, the grains collecting together perpendicularly and leaving intermediate air spaces. This Parry called penknife ice.								