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Opening Extract from...

A CLOUD A DAY

Written by **Gavin Pretor-Pinney**

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This book is dedicated to all the members of the Cloud Appreciation Society.

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Page 2: Fluctus wave formations, also known as Kelvin-Helmholtz clouds, forming in fog spotted by Pat Cooper over Bridgnorth, Shropshire, England.

Contents

Introduction 6

The clouds 14

Picture credits 360

Index 363

The Cloud Types

(SELECTED HIGHLIGHTS)

The 10 main types
KNOWN AS GENERA

Cumulus	Stratocumulus	Stratus	Altocumulus	Altostratus
LOW	LOW	LOW	MID-LEVEL	MID-LEVEL
100, 223	60, 135	65, 115, 244	31, 135, 266–7	92, 129

Cirrus	Cirrocumulus	Cirrostratus	Cumulonimbus	Nimbostratus
HIGH	HIGH	HIGH	MULTI-LEVEL	MULTI-LEVEL
213, 258, 281	73, 135, 154	288	95, 120	260, 315

Species and varieties

Fractus	Undulatus	Radiatus	Lacunosus	Uncinus
16, 67, 352	66, 183, 273	33, 342	78, 290	121, 213

Lenticularis	Fibratus	Castellanus	Volutus
169, 219, 232	66, 252	110	117, 172

Other clouds

Contrail	Distrail	Fog	Diamond dust
106, 148, 330	146, 344	184, 196, 294	72, 322

Cap cloud	Noctilucent	Nacreous	Horseshoe vortex
86, 123	126, 167, 241	39, 335	55, 295

Supplementary features and accessory clouds

Mamma	Arcus	Fluctus	Virga	Cavum	Tuba	Murus	Asperitas	Pileus
34, 171, 332	36, 293	44, 249, 359	69, 318	198, 344	255	215, 264	38, 104–5, 276	21, 112

A Cloud A Day

IT IS EASY TO FORGET that you live in the sky – not beneath it, but within it. Our atmosphere is an enormous ocean, and you inhabit it. This ocean is made up of the gases of air rather than liquid water, but it is as much of an ocean as the Atlantic or the Pacific. You may think of yourself as living on the ground, but all that means is that you are a creature of the ocean bed. You still inhabit the atmosphere like a sea creature does the water.

'It is a strange thing how little in general people know about the sky,' wrote the Victorian art critic John Ruskin (see page 40). Strange indeed, given how important it is to us. One reason for this might be that the sky is always there. It is the ever-present backdrop to our lives, and anything as ubiquitous as this is easily missed because it hides in plain sight.

We at the Cloud Appreciation Society believe that you would do well to pay more attention to the sky. Having your head in the clouds, even for just a few moments each day, is good for your mind, good for your body and good for your soul. This book aims to show you why.

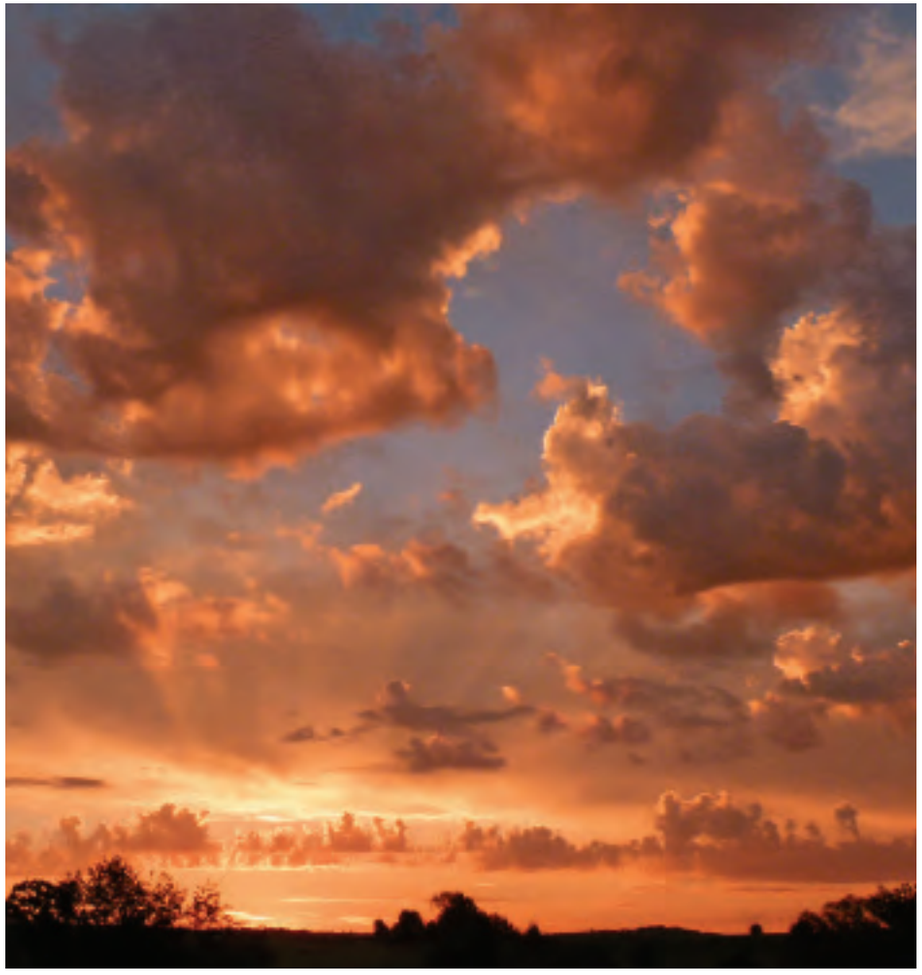
'The first step to wisdom', as the biologist E.O. Wilson noted (see page 161), 'is getting things by their right names.' Learning the names for a few of the different cloud types is a good way to start a new relationship with the sky. Every cloud is unique, but we humans love to put things into groups and so we gather their chaotic forms according to ten main types, known as cloud genera. You might have learned some of them at school – names like Cumulus, Stratus and Cirrus. There are also many sub-categories of cloud. These cloud species and varieties and cloud features crop up here and there among the main types. Some of them are rare and fleeting, and you have to really pay attention to the sky to be able to spot them. To start getting used to which cloud is which, you can navigate your way through the notable examples using the **Cloud Types** map.

A fragment of a rainbow, spotted in a shower over the Sierra Almijara mountains, Andalucia, Spain by Rodney Jones (Member 15,695).

SOMETIMES A SHOWER just doesn't cover enough of the sky to form a proper rainbow. The colour in this evening downpour might better be described as a 'rainsquare'.

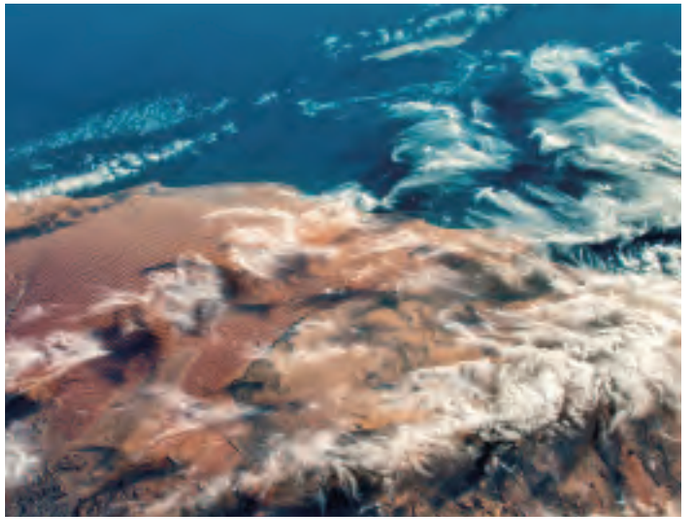
Altocumulus stratiformis perlucidus, spotted over Dorset, England, by Poppy Jenkinson (Member 39,335).

HERE IS HOW THE NAME FOR A CLOUD like this Altocumulus stratiformis perlucidus is constructed. 'Altocumulus' is the genus. A genus is one of ten main types into which most clouds can be classified. The Altocumulus genus refers to a clumpy cloud, up at the mid-level of the troposphere. 'Stratiformis' is the species. It means that the layer of clumps extends over a large region of the sky. 'Perlucidus' is the variety. It refers to when the clumps have gaps between them, rather than being joined into a more continuous layer. In other words, it means 'those nice little puffy ones that spread across the sky', but in Latin, to make it sound official.



A mixed sky spotted over Colombey-les-Choiseul, Haute Marne, France, by Karin Enser (Member 43,050).

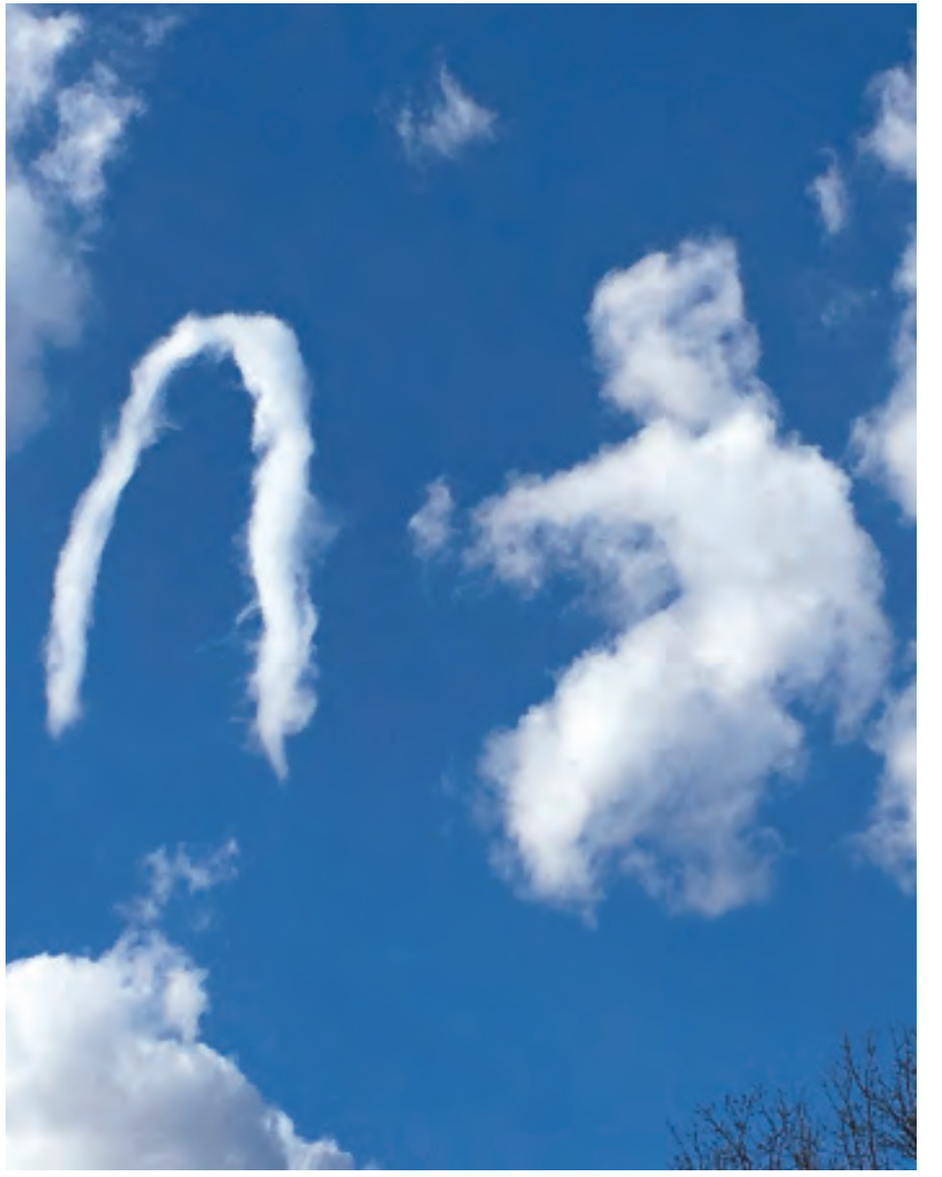
THIS BUSY SKY would be described as Stratocumulus castellanus and Cirrostratus that might have developed at the top of a distant Cumulonimbus. Thrown in for good measure are also the optical effects known as crepuscular rays. The Romantic poet Percy Bysshe Shelley put it another way in his 1813 poem *Queen Mab* as 'far clouds of feathery gold / Shaded with deepest purple, gleam / Like islands on a dark blue sea'.



Above: A lightning man caught tip-toeing across the Bahamas, spotted by Michael Sharp (Member 19,947). Left: Delicate bands of Cirrus sweep like brushstrokes on a canvas, spotted over the west coast of southern Africa by Commander Alexander Gerst aboard the International Space Station.

A volcano shroud cloud, spotted by Chito L. Aguilar from his balcony in Daraga, Albay, the Philippines.

SHROUDED IN A HUGE CAP cloud with a lenticularis above and a layer of Stratocumulus below, the Mayon Volcano in the Philippines is clearly not up for facing the tourists today.



Throwing a ball through a hoop over Paterson, New Jersey, US, spotted by Edward Hannen. Also known as a horseshoe vortex cloud and Cumulus humilis.

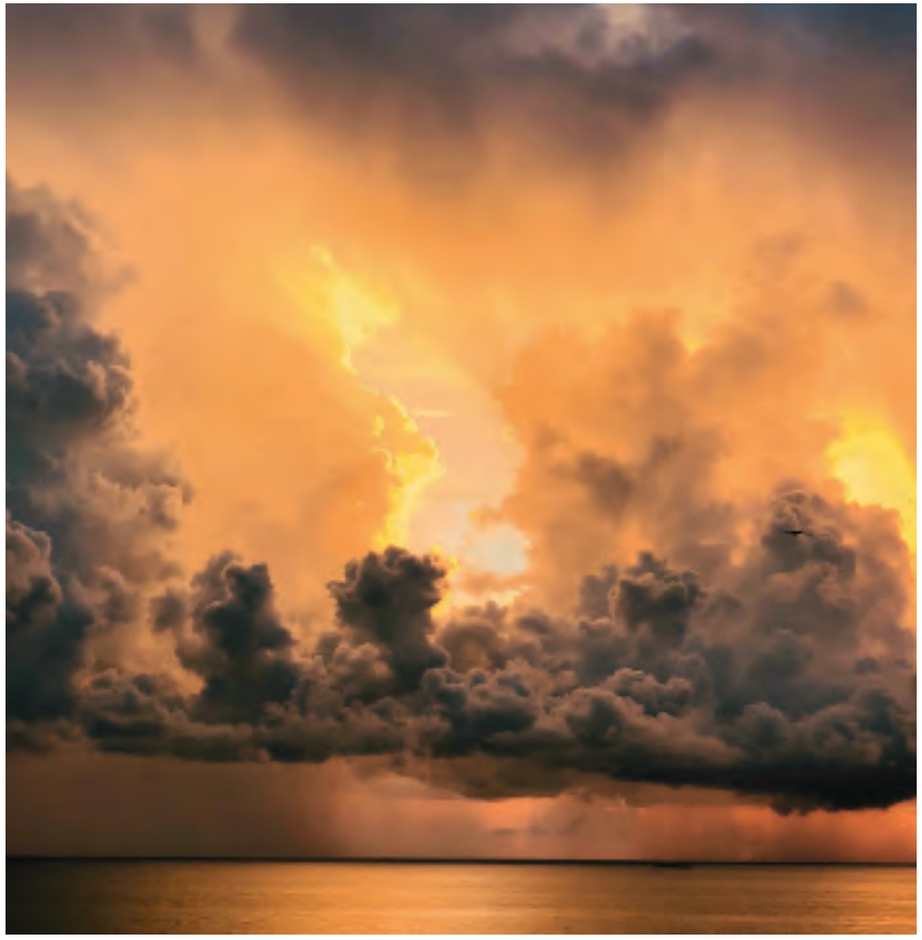
Altocumulus castellanus, spotted over north-west Oregon, US by Sallie Tisdale (Member 42,126).

THE CLOUD SPECIES known as castellanus is not the most distinctive of formations. In fact, it is easily missed, even by cloudspotters. But castellanus clouds like these spotted by Sallie Tisdale over Oregon, US are worth looking out for because they often forecast storms later in the day. The cloud's turrets indicate that the atmosphere up at the cloud level is unstable. When the crenellations of castellanus appear in Altocumulus clouds like these, they indicate that the unstable air is up at the mid-level of the clouds. This is significant. It suggests that any Cumulus clouds building from below as the day progresses will, upon reaching the unstable air, just keep growing. They'll likely continue to develop taller and taller until they've matured into Cumulonimbus storm clouds. 'The sky was active all day,' Sallie confirmed, 'and that night we did indeed have thunderstorms.'

Altocumulus perlucidus, spotted over Mount Fuji, Japan in around 1830 by Katsushika Hokusai.

WHEN THE CLOUDLETS in a layer of mid-level Altocumulus have gaps between them like this, they are described as perlucidus. This print by the 19th-century Japanese artist Katsushika Hokusai is from his classic series *Thirty-six Views of Mount Fuji*. It is titled *South Wind, Clear Sky* (*Gaifū kaisei*). That strikes us as a bit of a misnomer.

Astronauts aboard Space Shuttle Columbia in 1999 submit their winning entry for the 'Most Clouds Spotted in One Go' competition.



Towering Cumulus and Cumulonimbus gilded by the setting Sun, spotted over Singer Island, Florida, US by Luda Sinclair (Member 46,659).

As the skies appear to a man, so is his mind. Some see only clouds there; some, prodigies and portents; some rarely look up at all; their heads, like the brutes', are directed toward Earth. Some behold there serenity, purity, beauty ineffable. The world run to see the panorama, when there is a panorama in the sky which few go to see.

The Journal of Henry David Thoreau, 17 January 1852