

# Art Kites

## ABOUT ART KITES:

- Kites have been used as a form of artistic expression since the earliest times.
- Cultural influences in the shape of the kite often help to determine the artistic expression.
- All types of media are used for artistic expression on kite sails.
- Modern materials when combined with traditional kite making skills can create highly imaginative and personal artistic expressions.

## CONTENTS

Brief History of Kites	2
Kite Structure	3
Types of Kites	4
Physics of Kite Flight	5-7
Kite Tools and Materials	8-10
Art Kites Overview	11-14
Some Kite Artists	14-17
Art Kite References	18-19
About the Workshop	20
NAC Info	20

## NAC Art Kites Project

The Niagara Artists' Centre "You Fly It" Art Kites project is a unique opportunity to place creative inspiration on a highly visible art display platform: the kite.

This unique opportunity allows you to participate in an event designed by NAC to honour the 50th Anniversary of the Canada Council for the Arts.

Join in and make brightly-coloured, celebratory kites to fly high in the air against a spotless blue sky!



### *Joining Spirit to Physical*

*The simple kite is a vehicle which speaks of the joining of the spirit and the physical. Kite are tools, mediums of expression in space, meditations on space: structures and surfaces, colors and forms interacting—visual, aural, tactile. The kite's flying line connects the human hand and mind with the elements. Kites offer artists unparalleled opportunity to play, to explore, to experiment, manipulating scale and distance, making an immense space visible, unlocking the imagination.*

Art Volant symposium, Mallorca, 1995

Quoted in: The Drachen Foundation Journal - Summer 2004

## Art Kite Project Time Line

- Introductory Workshop:** Saturday, August 25, 2007 at the Niagara Artists Centre—10:00 to Noon.  
Overview of the Art Kite project and Introduction to Kites and Kite Building
- Development of Artist's Proposal:** Creating your own concept for submission to NAC for approval.
- Second Workshop:** Mid-September, 2007 - Exact date to be determined. Specific design assistance with your Art Kite Project. An in depth and hands on session. Personalized help with kite construction.
- Art Kite Flight Day:** Sunday, Oct. 21, 2007 - Into the sky! Art on High! Flying your creations. Juried judging and fun in the air! Be certain to have your camera with you!

# A Brief History of Kites

A kite is a flying device that remains tethered to a fixed point or to the person flying it.

It must fly in a reasonably steady fashion at an angle of 15 degrees above the horizon for a sustained period of time to be considered a “kite”.

- The exact date and origin of the kite is not known but it is believed that they were flown in China more than two thousand years ago. There is anthropological evidence to suggest that the kite may have simultaneously developed in the Indonesian archipelago and South Pacific islands.
- One of the earliest written accounts of kite flying was about 200 B.C. describing the Chinese general Han Hsin, during the Han Dynasty, flying a kite above a town to determine how far his army would have to tunnel. Knowing the distance to dig, his troops surprised their enemy and were victorious.
- Kite flying spread from China via trade and with missionaries to Korea, Japan, India, etc. Kites were brought to Japan about the 7th century by Buddhist monks. They were used to avert evil spirits and to insure rich harvests. Kite flying became very popular in Japan during the Edo period.
- An old Japanese legend claims that a thief used a large kite to carry himself to the top of Nagoya Castle in order to steal golden statues from the roof. All he obtained were some flakes of gold leaf and he was captured and punished severely when he bragged of his exploits.
- There are many stories about how the people of Micronesia used a leaf kite to carry bait out over the water where fish fed.
- The Polynesians have myths about two brother gods introducing kites to man when they had a kite duel. Kite fighting is still an extremely popular pastime in the Far East and the Indian sub-continent.
- Marco Polo carried stories of kites to Europe around the end of the 13th century. Illustrations of the period show non-flying dragon kites based on military banners. Kites were regarded as curiosities and had little impact on European culture until they were used as scientific instruments.
- In the 18th and 19th centuries kites were used by vehicles for discovery. Ben Franklin, Sir George Caley, Samuel Langley, Lawrence Hargrave, Alexander Graham Bell, and the Wright Brothers experimented with kites and contributed to development of the airplane. Kites designed by William Abner Eddy and Hargrave were used to raise meteorological instruments. In England, a schoolmaster, George Pocock, used a pair of kites to pull a carriage at speeds of up to 20 miles per hour, and he lifted his daughter in a chair to demonstrate the power of kites.
- As the airplane became firmly established in the early 1900's, the kite was relegated to a child's toy and used for recreational flying. However, cultural uses of kites persisted around the world and the beauty of a well made kite in the sky is a natural attraction to people.
- The kite was again used as an instrument of exploration in the early 1900's with Guglielmo Marconi using a kite to raise an antenna in Newfoundland and receive the first trans-Atlantic wireless signal from England.
- During the past fifty years, Francis Rogallo's flexi-wing and Domina Jalbert's parafoil kites helped develop modern hang-gliders and sports parachutes. In 1972 Peter Powell made the dual line stunt kite popular. The development of “sport kites” has led to a major resurgence and interest in kites. Today, many adults and children are enjoying kites as an activity, a serious hobby and more recently, as a form of artistic expression.

To see a complete **Time Line of Kite History** visit:

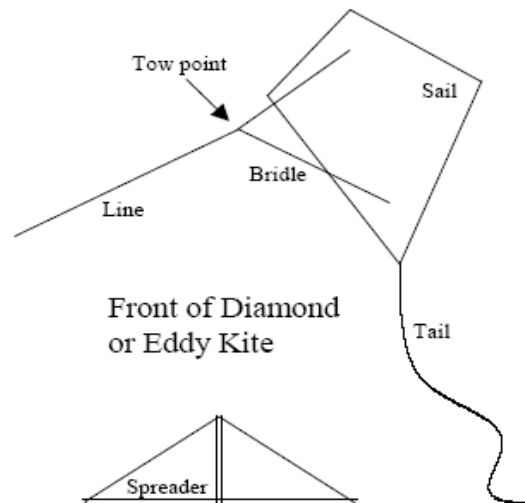
<http://best-breezes.squarespace.com/time-line-of-kite-history/>

# Kite Structure

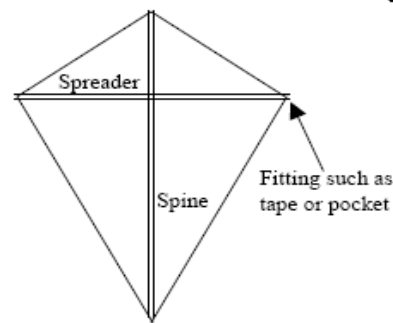
## Parts of a Kite:

Generally, most kites have the following parts:

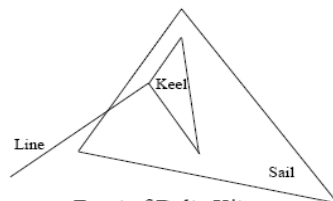
- **Sail:** the cover material that provides a surface to the kite. The sail may be of fabric, paper, woven natural materials (leaves, reeds, etc.) or modern coverings such as plastic, Mylar, Tyvek. The sail provides a surface that directs the air to provide the kite with lift. Typically the sail is the surface used for artistic and graphic expression.
- **Bridle:** a line or group of lines that keeps the kite at the proper angle to the wind and supports the kite at multiple points.
- **Line:** provides the 'tether' for the kite that keeps it from flying away. Generally, thicker line is stronger and strength of line is measured in pounds.
- **Tow Point:** Connection point of the line to the bridle.
- **Spars:** Most kites will have a skeletal structure made up of dowels, sticks, fiberglass or carbon filament rods to provide the structure to which the sail is applied. Kite spars can have special names like "spine", "spreader", "longeron" and "cross spar" to help describe the function of the spar.
- **Fittings:** include spar to spar fittings (special connectors) and spar to fabric fittings such as tape, pockets or glue.
- **Tail:** flown from the back of kite, the tail adds drag to stabilize the kite and keep it pointed into the wind. Tails can also be used in an artistic fashion.
- **Keel:** a special rudder like device that performs the function of the bridle in keeping the kite directed into the wind. Only a few kite designs employ a keel.



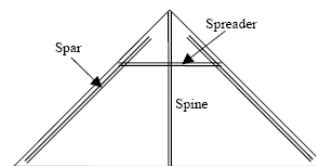
Front of Diamond or Eddy Kite



Back of Diamond or Eddy Kite showing spars



Front of Delta Kite



Back of Delta Kite showing spars

*"A kite is a heavier-than-air craft that depends on the wind to overcome gravity to fly. All kites have one or more surfaces to be acted upon by the wind, a bridle to hold the kite at an efficient angle into the wind, a flying line to keep the kite from blowing away."*

Source: The Drachen Foundation, Seattle WA.

# Types of Kites

There are several different types or categories of kite design. Nothing sparks more debate among kite fliers than how to categorize kites and how to fit innovative kite designs into a categorization scheme. Generally, it is agreed that there are about ten different categories of kites.

**Flat.** Plane-surface kite with two dimensions, vertical and horizontal. Includes two-dimensional kites which may bow rearward under wind pressure.



**Bowed.** Any kite which has wingtips rearward from the center spar and with the bowing maintained by means of a bow string or other fixed means.



**Box or Cellular.** Cellular kite with three or more sides held open by means of struts, or by wind pressure, on one or more of the sides.

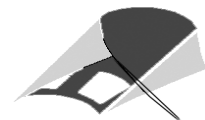


**Keeled.** A kite which has a third dimension protuberance usually at right angles from the face of the kite, to which the flying line is attached.



**Parachute.** A flexible umbrella-like canopy with multiple shroud lines attached to the edges, held open by air pressure.

**Sled.** A rectangular canopy, with usually two or more vertical struts, held open by air pressure to form a semi-rigid kite.



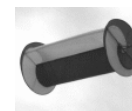
**Parawing.** A non-rigid kite of two or more conic sections and a simulated keel, formed by use of flexible material and multiple bridle lines which hold the form in shape under wind pressure.



**Parafoil.** A non-rigid kite with a frontal canopy and rear channels, which provide vertical stiffening.



**Rotor.** A rigid wing or cylindrical surface acting as a continuous-revolving rotor, plus one or more disks secured to the rotor to achieve stability. The kite rises as a result of the Magnus Effect.



**Autogyro.** One or more horizontal propellers on the shaft connected to a fuselage.



*Above classification system based on work by Ed Grauel, published by The Drachen Foundation, Seattle WA, USA*

# Physics of Kite Flight:

A kite is a heavier than air object. Because of this fact, it is affected by the force of **gravity**.

For a kite to fly, it must be lifted by forces that are greater than the force of gravity. Sufficient wind must be present to provide **lift** that will overcome the weight and force of gravity on the kite.

A well designed and carefully constructed kite will form a stable and self-adjusting system in flight. Air moving toward and over the surface and structure of the kite will create lift and allow the kite to rise. If the kite is well constructed and balanced it will move neither forward nor backward and appear to be unaffected by gravity.

Simply put, a kite flies because it is spilling air downward to give it lift, and outward to give it stability. Visualize the wind as made up of millions of small particles in motion. When the wind reaches the kite's surface, many of these small particles bounce off the kite and are pushed away, much like water is being pushed away by the hull of a boat.

For those who are more technically inclined, there are other forces at play in the 'lift' of a kite. These include: (1) Newton's Third Law of Motion, (2) the Bernoulli Principle, and, in some instances, (3) the forces of rising air: *thermal* and *updraft*.

The movement of the air (wind) over the face and structure of the kite puts into effect several of the forces of physics.

## Forces at Work on a Kite:

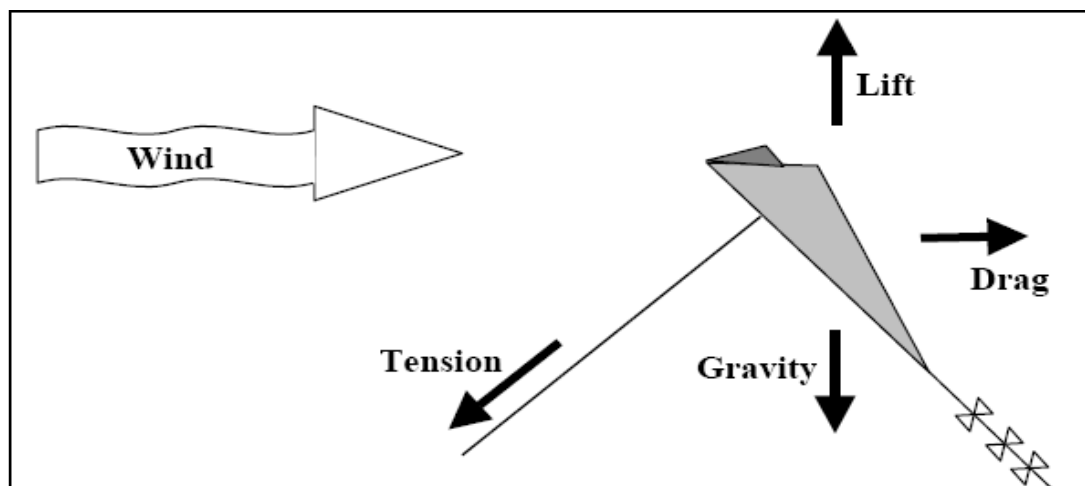


Diagram: *AKA Kites in the Classroom*—Page 17 (1992)

## Forming a Stable System:

How does a kite become stable? To provide stable flight, the kite must have some aerodynamic shape that will equalize opposing forces: -lift vs. gravity, -roll/pitch/yaw, and -lift + drag vs. line tension.

## Lift vs. Gravity:

The gravitational pull of the earth exerts a force on the kite. The greater the overall weight of the kite, the greater the gravitational pull of the earth on it.

A good analogy to think of when reflecting on the weight of a kite is to think about boats of various sizes (and weight). A large boat can float many passengers if the water is deep enough. A small boat would sink with too many passengers.

# Physics of Kite Flight (cont'd.)

The same is true for a kite: it will lift if the wind is strong enough to carry it's weight aloft on the surface of it's sail. In other words, the kite must be light enough to float on the current of air that is present if it is to fly.

Gravity constantly forces an object towards the surface of the Earth.

Lift, if sufficient, will counteract the force of Gravity.

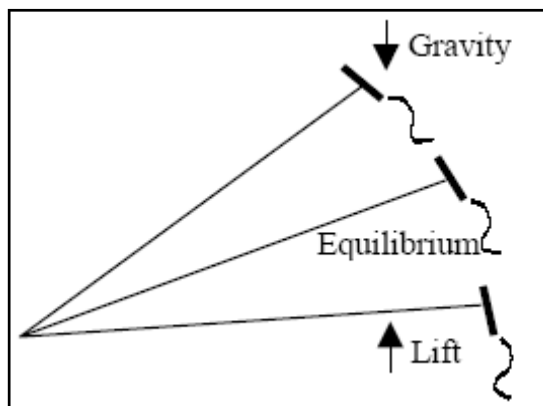


Diagram: *AKA Kites in the Classroom*—Page 17 (1992)

## Drag:

Drag is the total “air resistance” to the kite while it is in flight. It is often equated with the term “pull” which is felt by the kite flyer as s/he holds on to the kite line. This is a force to be reckoned with as the drag of a kite can be enormous in certain circumstances and can result in injuries to kite fliers or damage if the kite crashes to the ground or breaks away from its flying line.

A certain amount of drag on a kite is required to keep it flying in a stable manner. There must be enough natural drag to keep a kite from “over flying” the kite flyer and then crashing into the ground.

To increase the drag on a kite it may be necessary to add a tail which will keep the kite from over flying and assist to keep it pointed into the wind. Not all kite designs require tails. Some kite designs inherently create enough drag to keep the kite flying in a stable manner.

## Dihedral - Assisting the kite to achieve stability:

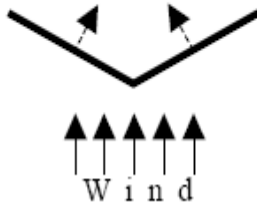
In geometry, an angle formed by two planes is called the "dihedral."



On some kite types a dihedral is built into the structure of the kite. This is the bow or "V" shape of the kite. The typical dihedral angle is about 30 degrees, or 15 degrees on each side. The dihedral gives the kite roll stability. When a kite with a dihedral rolls left or right, the wind exerts greater force on the side flattest to the wind thereby pushing it back into equilibrium. This provides ‘roll’ stability and ‘yaw’ stability to the kite.

# Physics of Kite Flight (cont'd.)

1. Wind exerts equal force on both sides (top view)



2. One side tilts, giving more pressure on that side



3. Forced back to equilibrium

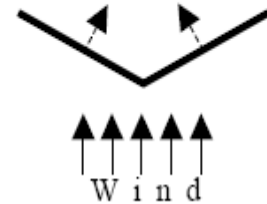
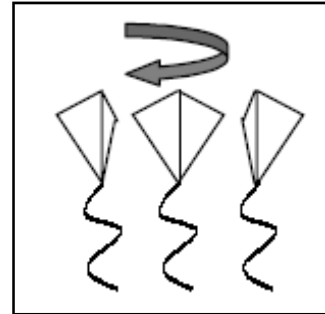


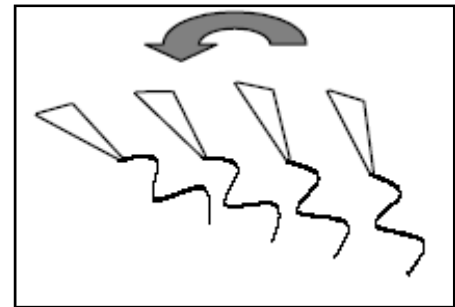
Diagram: *AKA Kites in the Classroom*—Page 18 (1992)

## The Three Sisters: Roll - Pitch - Yaw:

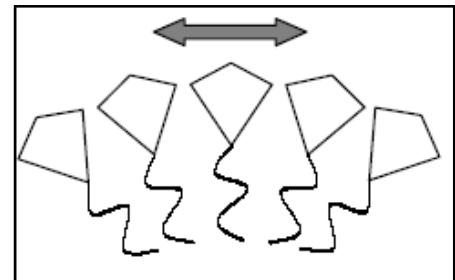
**Roll** - When a kite twists, flutters, or rolls, it is usually caused by a kite that is not symmetric. Make sure left and right are the same size and that the bridle or tow point are in the center.



**Pitch** - The angle that a kite is tilted into the wind is also called the pitch or "angle of attack." This can be adjusted by moving the tow point up or down on the bridle. The lift generated by the kite is related to the pitch and the sail area. In light winds the kite should be adjusted to have a large angle of attack and in strong winds the angle of attack should be reduced.



**Yaw** - If the kite turns or spins left or right, lengthen the tail to add drag or bow the kite to increase the dihedral.



At some point in your kite building and flying experience you will have to deal with the Three Sisters: Roll—Pitch—Yaw. They can all be tamed to ensure that your kite will fly properly!

Diagrams: *AKA Kites in the Classroom*—Page 17-18 (1992)



# Kite Building Tools and Materials:

Kite making tools are generally not expensive and many are already found in most homes. The lists below are meant to assist you to begin your kite making adventure. Note that the list below is not extensive and your creative mind may conjure up many more useful tools, devices and materials.

## A. Kite Design Tools:

- Pencil -and -Eraser
- Ruler and/or Metre stick: both a long and short measuring device will be very useful.
- Square and Protractor: will help you find and scribe out consistent angles for your kite plan.
- Paper—several pieces of standard computer paper can be taped together to give you a large surface -or- you could purchase a small roll of banquet table paper for your designs.

## B. Kite Framing Tools:

- Knife: shaping and cutting spars
- Saw: cutting spars of various lengths.
- Light Hammer: gentle force is useful on rare occasion and can be emotionally satisfying as well.

## C. Kite Making Materials:

### Frame

**Wooden Dowels:** available from lumber centre, Home Depot, some hardware stores. These are the most commonly used kite spars. Inexpensive and effective, wooden dowels come in a variety of diameters up to 48” lengths. They are easily cut with a saw and can be shaped to some degree with hot water and a drying frame. The weight to strength ratio is quite good and they can easily be replaced in case of breakage.

**Bamboo:** These are the preferred framing material for some kite makers. Bamboo is skillfully used in Asian kites. Bamboo is strong with a good weight to strength ratio. Experienced kite makers that use bamboo split their own sticks from large bamboo rods that have been appropriately aged. It is not easy to get Bamboo in a usable form for kite frames in North America. The most common type of bamboo available in North America is known as “match-stick” bamboo. Some sources for this type of bamboo are older window blinds and divider blinds. Bamboo can be shaped with moisture and heat to hold a wide variety of shapes. Can also be split into varying thicknesses with a sharp knife and some skill which takes a bit of time and practice to acquire. When making very small kites, bamboo-like reeds used in some table place mats and light window blinds can be used effectively.

**Fiberglass Spars:** very durable but not readily available except through on-line kite supply centres. Fiberglass comes in solid or tubular format. Much heavier than wooden dowels and more expensive as well. They can be cut with a hack saw, but watch out for glass splinters that can penetrate your fingers if you are not cautious.

**Carbon Composite Rods:** Light, durable, strong—these are the ultimate kite spars. They come in solid and tubular format and can be cut with a hack saw. Generally only available through on-line kite supply centres. These are the most expensive of the kite framing materials.



### C. Kite Making Materials (cont'd):

#### Sails

**Paper:** can be used for kite sails. It can be easily cut to shape and fastened to or around most kite frames. In addition, it makes a great surface to paint on (water colour, oil, acrylics, etc.). Many papers are quite inexpensive. There are some exquisite Japanese papers and hand made papers as well. Tissue paper is often used in making very light kites in India, Pakistan and Afghanistan. The major drawbacks of paper as a sail material are its propensity to tear or split under wind pressure and its easy stretching and deterioration with exposure to moisture. It can be glued or taped to the kite frame.

**Plastic sheeting:** makes reasonably rugged kite sails that will generally stand up to the pressure of the wind if properly supported by the frame of the kite. Plastic sails can stretch under extreme pressure and hot sunny conditions, but they are generally impervious to moisture. The surface can be artistically treated with colour markers and some paints that will bond to plastic surfaces (much experimentation will be needed). One unique method of applying artistic treatment to plastic sheeting is to bond appliqués of differing colours of plastic or other materials to the surface of the sail. Generally the addition of layers of colour will not permit much translucence of the kite sail. This can detract from the artistic endeavour of any kite sail when it is in the sky. It can be glued or taped to the kite frame.

**Spun Olefin:** (Tyvek™) makes excellent sail material in terms of durability, moisture resistance and overall strength. It will also take colour from markers and will hold the bond of some paints (again, some experimentation will be necessary). It is available in two forms:

- A) Soft Tyvek: this material can be glued or sewn to fit the kite frame. It is available from on-line kite supply centres and from The Hobby Shop in St. Catharines.
- B) Hard Tyvek: this material can be glued or taped to fit the kite frame. It is available in building supply centres such as the Home Depot. It is usually sold in rolls that are 36-348" wide by 50-100' in length.

Spun Olefin is not overly translucent. Hard Tyvek tends to be more translucent than Soft Tyvek. Contact glue and tape are used to fasten the sail to the frame.

**Mylar:** This relatively new medium has gained favour among kite makers who specialize in small fighter kites. Strong, moisture and UV resistant it generally is not at all translucent. Some interesting effects have been gained by using various materials on the surface of the mylar to etch away the bonded colour leaving underlying clear areas that are totally translucent. Tape and contact cement are the typical means of fastening the sail to the frame.

**Ripstop Nylon:** is the best fabric for kite sails. It is water and UV resistant, does not stretch much under pressure and is very translucent. Many kites are designed with ripstop nylon fabric using the abundant array of colours available. Typically the artistic design is sewn on to the kite in layers and then the backing layers are cut away carefully (to leave all stitching intact). What remains is the artistic rendering which is very translucent when back lit by the daytime sky or sunlight. Generally, ripstop nylon for kite fabric is only available from on-line kite supply centres. Typically pockets are sewn to the ripstop fabric to attach the sail to the frame.

**Other Fabrics:** Fabric shops contain a wide variety of fabrics of different colour, texture, strength, and a number of other characteristics. Select fabrics that will be somewhat stretch resistant and provide some translucence. In addition, if you intend to paint on the surface experiment to see how the paint bonds and the effect it has when held up to back light.

### Fittings, Connectors, Glues and Tape:

- Fittings** Specific preformed fittings in nearly infinite varieties can be purchased to connect kite frame spars of most diameters. These can be found on-line at kite supply centres.
- Connectors** Connectors for spars can frequently be made from readily available materials such as vinyl tubing (hospital tubing or aquarium air line tubing) that comes in a variety of inside diameters that will fit most kite spars. Some creativity in cutting, slicing, poking holes and even fastening together various sections of the tubing will make rugged and secure fittings to join kite spars in a variety of ways.
- Lashing spars together with string or touch thread can also make for rugged and durable joints in kite frames. Once your connection is made, coating the entire lashed connector with “white glue” and allowing it to harden will provide a secure connection. Some kite makers substitute a coating of urethane varnish to ensure that the connection remains tightly bonded and moisture resistant.
- Glues** A wide variety of glues will work on kite frames and to bond kite sails to kite frames. It is generally wise to experiment with a glue on your frame and sail material in some test situations to see how it holds up and whether or not it destroys the sail material due to chemical reactions.
- Tape** Tapes of all varieties can be used in kite construction. Most hardware, Canadian Tire, or building centre stores will have a wide array of tapes with various holding properties. Again, some testing to see how the tape holds up under stress, moisture, and heat conditions is wise before committing it to your final project.

### Shaping Kite Spars:

**Wooden dowel kite spars** of 1/8, 3/16, and 1/4” diameter can be shaped and bent to a limited degree by thoroughly soaking in hot water and then carefully bending into curves. There is a limit to the degree to which a dowel can be bent and shaped. Indeed, some of the limits are dependant on the grain of the individual dowels (one may bend, while several others may break) and the patience and skill of the kite maker.

Using a **jig** to shape a thoroughly soaked dowel will increase the chances of making a curve and allowing the dowel to dry into its new shape. Some time and patience are involved in this process.

**Bamboo** can be shaped in a similar fashion to that used for wooden dowels. Again, patience and perseverance will yield the best results. Bamboo will generally take more bending and retain more natural strength than will wooden dowels.

**Fiberglass and carbon rods** of small diameter have properties which will permit bending and curving. However, the natural condition of these materials is to return to a ‘straight line’ configuration. So they must be held in shape by lashing, tying or by insertion into shaped pockets in the kite’s sail.

# Art Kites—An Overview



“The sky has beckoned artists since ancient times. Some have depicted the heavens as home to gods and angels, tried to paint the elusive light in an ever-changing atmosphere or devised objects that could actually fly.

.....

Others, however, view the endless space above our feet as a borrowed retreat from earth’s high tech arsenals, choosing instead to release visual events into the sky on gentler wings.

.....

... the decision to pursue kites as art reflects a sense of respect for the sky as well as the artist’s acceptance of, and collaboration with, the givens of nature. The choice to site a work among the clouds, the physical act of holding and maneuvering the taut kite string, the consideration of how the kite’s color will be affected by infinite variations of natural light, and the artists’ fascination with the constantly changing configurations of the wind-activated flying object - all suggest a desire to co-labor with the vast, powerful and unpredictable space just above the Earth’s surface.”

From the Introduction by Pamela Houk to: *Art That Flies.*  
Asker, Curt; Matisse, Jackie; and Streeter, Tal.  
The Dayton Art Institute,  
P.O. Box 941, Dayton, OH 45401  
1991 - ISBN 0-9387809-10-1

“Pottery for the wind, simple, pure and uncompromising, the kite must assume one of several shapes if it is to fly. Yet within these aerodynamic limits, there is a heaven of room for engineers to explore and artists to express a vision.”

Tal Streeter,  
noted Kite Flier, Artist, Author and Cultural Historian  
In: “Heavenly Humours: The Modern Kite,”  
*American Craft*, vol. 39, no.4, Aug.-Sept. 1979, p. 37.

### What differentiates an art kite from a traditional kite?

Certainly not beauty alone. Many traditional kites are extraordinarily beautiful, while kite maker Marten Bondestam has this to say about art kites: "Artistic kites are kites with some extra intellectual qualities. Beauty is not art. Art can be ugly, but must have an intellectual message."

Not just a painting in the sky, an art kite can be a sculpture in the air, a flying billboard of celebration or protest, or an interactive illustration of man and his environment.

From: [http://www.drachen.org/about\\_art\\_kites.html](http://www.drachen.org/about_art_kites.html)



South Pacific Island Leaf Kite

Immediately upon the launch of a kite into the sky an artistic interaction is inaugurated.

From the earliest time that kites took to the air, it was obvious to the first kite fliers that their tethered flying objects made a high impact visual statement in the sky .

Kites engaged observers on the ground in the interaction of the object with the clouds or open sky. The hues of the media used for the sails were in artistic contrast or compliment to the colour of the sky. It was impossible not to see the changed nature of the sky once the kites were sailing upon it.

Likely it did not take long for early kite builders to determine that specific visual representations could be 'hung in the sky' for all to see. Using the surface of the kite sail, in whatever shape the frame was constructed, the kite builder was at once not only a technologist using the harnessed force of moving air to lift an object, s/he was now also an artist placing an *object d'art* in a very conspicuous location for all to see.

As with many artistic endeavors, the culture of the kite builder likely influenced the expressions that were placed on the 'canvas' of the kite sail. Thus in China, Japan, Malaysia, India, the Pacific Islands, -early art work upon the surface of the kites was directly influenced by the stories, legends, religions, hopes and aspirations of the people of the time.



Kites from Thailand



Vietnamese Peacock Kite



## Art Kites (cont'd)

Looking at kites through the lens of artistic expression alone is a field that necessarily draws upon history, sociology, cultural anthropology, religion, and a variety of other fields. Some work has been done in this area, but no thorough study has yet catalogued and interpreted this domain of kite research. Instead, individual kite scholars have delved into this vastly untapped field in limited and focused studies that offer glimpses of the effects of art on kite construction and flying as well as the specific efforts to develop kites as a form of art.

This latter domain of using kites to make art that flies is of increasing interest in the early 21st century. Indeed, this Art Kite project of the Niagara Artists Centre is one measure of the relatively new “art kite” movement.

### The beginnings of the Modern Art Kite Movement

“In 1969 New York artist Tal Streeter turned away from his rapidly expanding career and left for Japan to study the art of kite making. Following his return to the United States two years later, he wrote the *“The Art of the Japanese Kite,”* arguably the most influential book about kites ever published in English. His journey and subsequent account of Japanese kite making traditions, which go back over 1000 years, has become the definitive resource and inspiration for a generation of North American kite making artists.”

From: [http://www.weisman.umn.edu/exhibits/Tako-Japan/exhibit\\_A\\_comm.html](http://www.weisman.umn.edu/exhibits/Tako-Japan/exhibit_A_comm.html)

“Tal Streeter is recognized as the first artist in the West to employ traditional kite making techniques in the context of contemporary art. His sculptures, drawings and kites have been featured internationally in museums, galleries and festivals. His work is included in many public and private collections including the Museum of Modern Art and the Storm King Art Center. Streeter is the author of seven books about traditional and contemporary kites. Streeter is also known for large sculptural works in steel and less traditional materials such as fabric and helium balloons. He has traveled extensively to research kite traditions from Malaysia to India, always returning home with scores of photographs and new material for the next book.”

From: <http://www.windart.subvision.net/aca-windart/sub/talstreeter/index.htm>



Guatemalan Kite—Festival of the Dead



Endless Column by Tal Streeter  
70 feet high—Storm King Art Center



Tal Streeter's  
influential book

*The Art of the  
Japanese Kite.*

## Some Kite Artists and Samples of Their Work

As a kite builder gains skill with the mechanics of kite construction, there is an inevitable increase in attention to artistry in the sky. Presenting a vision, concept or expression of the individual seems to occur naturally the longer each kite builder stays at his or her craft.

A few of the many current kite designers whose work has gained international attention are highlighted here.

### Jose Sainz - San Diego, CA

Jose has been making and flying kites known for their intricate appliqué and use of bold contrasting colors since 1988. He has competed at both the regional and national levels and has won three Grand National Championships in 1992, 1994, and 2002.

Born in Mexico, Jose has traveled throughout the world exhibiting his kites at international festivals. He works primarily in ripstop nylon and is known for his incredible appliqué skills.



### Pierre Fabre - Paris, France

A graphic designer and illustrator by profession, Pierre Fabre decided in the mid-1980s that he wanted to step into the third dimension. "I started making kites," he says. "They allowed me to fly away from my drawing table." Born and reared in Paris, Fabre took an undergraduate degree in art and set up as a free-lancer but was soon lured into the kite world when he discovered some excellent kite plans in a book.

After successfully making several from blueprints, Fabre, in typically individualistic style, struck out on his own and soon hit on a "sky signals" theme that won him acclaim. He sought kites with the bold look of a railroad semaphore on land or a ship's buoy in the ocean. "The graphics and colors of the kite, inspired by marine signaling, have an imaginary functional look that makes it a flying signal in the sky." From here he looked at all corners of the Earth and found endless material to incorporate into his kites. In the kites pictured here, we see a touch of Africa.



## Some Kite Artists and Samples of Their Work

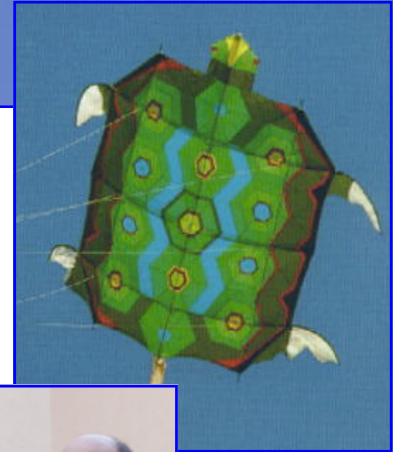
### Scott Skinner - Monument, Colorado

Born and raised in the Western U.S., Scott Skinner graduated from the Air Force Academy and served seven-and-a-half years as a flight officer, achieving the rank of captain. After leaving the Air Force, Skinner earned an MBA at the University of Denver and settled into a career as manager of family investments.

Meanwhile, Skinner pursued his kite hobby, "begun in 1975 as a relief from flying planes and because of a continuing fascination with aero-dynamics." He began making kites intensively after learning how to sew. "Living in Colorado is conducive to kite making," he says. "It's cold and windy from October through February and that's when I build kites."

Skinner hit on the concept of combining traditional American patchwork quilt designs with traditional Japanese kite forms to create a unique West-East hybrid. From this concept evolved the reproduction of images from Japanese paintings, such as fish or water motifs, that, when pieced together in new combinations, formed surprising, pleasing juxtapositions. A meticulous craftsman, Skinner's large rokkakus, Edos, hexagons and octagons have won him widespread acclaim.

In 1995 Skinner founded *The Drachen Foundation*, a non-profit educational corporation devoted to the increase and dissemination of knowledge about kites worldwide. It takes its name from the German "Drachen," which means "kite" or "dragon." The Drachen Foundation is located in Seattle, WA. Its web site is located at: <http://www.drachen.org/>



### Robert Trepanier - Montreal, Quebec

One of the most innovative kite artists of the modern day, Robert Trepanier is a guest at kite festivals all over the world and is frequently a "kite artist in residence" at a number of prestigious kite making retreats for serious kites.

Robert's specialty is images of people displaying a variety of emotions and poses. He takes many artistic liberties with his figures. As a result his kite figures are striking sky exhibits that attract much attention and discussion.





## Some Kite Artists and Samples of Their Work

### Robert Trepanier (cont'd):

Robert is also fascinated by animals. He explains this interest as a result of spending many years admiring the work of his father, a veterinarian. Some of his animal kites are whimsical and imbue a spirit of wonder and humour as you view them moving around in the open spaces of the sky or juxtaposed next to buildings.

Robert's kite art takes a long time to produce since it is all hand painted and in some cases, hand dyed. His kites are among the most expensive kites for collectors today.



### George Peters - Boulder, Colorado

After school-ing at California 's Fullerton College and Art Center School and an inspira-tional summer at an art center on a Greek island, Peters spent more than a decade earning his living by doing quick watercolor portraits for all comers. He learned the art at Disneyland as an undergraduate and continued it in Honolulu , operating from a sidewalk stand on Waikiki .

Peters states: "I like the combination of making something fine and then throwing it to the winds." "I like the impermanence of kites, their essential fragility, their lightness. Kite flying is using nature, using the wind. The wind becomes part of the work."

Peters has been all over the world, flying and teaching. "Travel is one of the perks of the sport," he notes. At his workshops, he emphasizes originality. "Let the materials dictate what is made from them." "Flight, that's what it's all about," Peters says. "I like to put up as many kites as possible, then lie down and watch them. It's the festival effect I really like."



## Some Kite Artists and Samples of Their Work

**Istvan Bodozcky** - Budapest, Hungary

Istvan Bodozcky is likely the most innovative kite artist in the world today. He is a painter of beautiful abstractions. As professor of art and pedagogy at the Hungarian University of Craft and Design, he is also a committed teacher. Born into a family of lawyers, he instead chose to be an artist at the age of 14. "I'm considered a rebel by my family," he says.

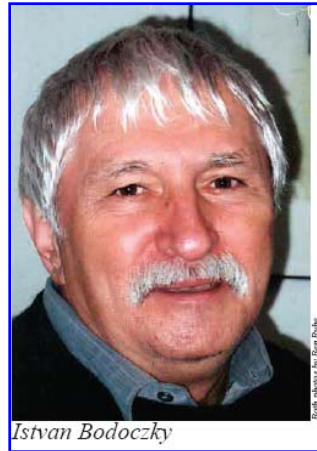
Father of three sons, he took up kiteflying in the 1970s to amuse them. It was hard going for him at first because he couldn't get his homemade kites to fly. "The children were upset, so I kept at it," he recalls. He not only persevered, he became "obsessive," he says.

"My pictures and kites came together when a Hungarian television crew challenged me to fly one of my oddly shaped paintings on exhibition in an art gallery. It was a work on paper framed by bamboo with a free-form, highly irregular outline. I was rather annoyed at the challenge.

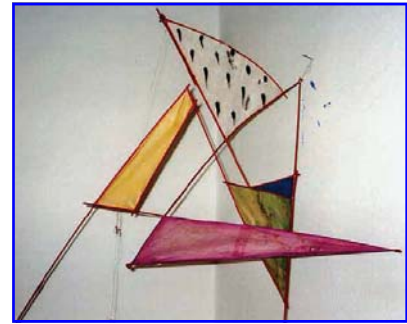
"But I did take up the challenge and luckily that first painting cum kite flew. It flew so easily and so well that it made me believe I could fly anything. Then I found out it was not so easy after all. But I remained convinced that if I had luck and patience I could make any of my paintings fly and this has proved to be the case.

"Combining painting with kites kept me from developing a split personality, which I did not want to have. By making paintings that fly, I get the joy of doing both art and making kites."

Soft-spoken, reflective, serene, Bodozcky confides that most of his asymmetric creations do not fly well immediately. "I go to a faraway, hidden spot to test fly them. I'm not an expert at aerodynamics. I use trial and error. I add beeswax to change the weighting, change the bridling which I have only guessed at to begin with. And of course I use tails. Almost all my kites fly at the end. I never give up. But I am not fond of some of them if too much struggle has been involved."



*Istvan Bodozcky*



# Art Kite References:

## References and Citations:

Information about the Physics of Kite Flight are available in a number of kite books. However, the best and most concise information, which is included in this document, comes from The American Kitefliers Association's 1992 document: ***Kites in the Classroom***. [www.aka.kite.org](http://www.aka.kite.org)

Most biographical information and photos about the kite artists and their kite art, comes from the on-line resources of The Drachen Foundation.

[www.drachen.org](http://www.drachen.org)

Additional kite artist biographical information comes from the "Kites on Ice" Festival, Madison, WI.

[www.madisonfestivals.com/kites/kiters.php](http://www.madisonfestivals.com/kites/kiters.php)

## On-Line Sources of Kite Building Materials:

The best sources for kite building materials on-line are:

**The Kite Studio:** <http://www.kitebuilder.com/>

**Hang-em High Fabrics:** <http://ecom.citystar.com/hang-em-high/>

These sites ship to Canada and are the premier sources for high quality framing materials, connectors and kite fabrics. In addition, a number of specialty items such as glues and tools can be obtained here.

## Local Sources for Kite Building Materials:

**Framing materials such as wooden dowels** can be obtained at lumber yards, The Home Depot, some hardware stores and Canadian Tire stores. Prices vary so shop by phone first.

**Fabric sail materials** can be obtained at any good fabric store.

**Paper sail materials** can be obtained at party stores and Weber's Art Store, 211 Martindale Road, St. Catharines. [Mylar and tissue paper sail materials](#) can be obtained at Dollar Stores and gift wrap stores.

**Glues** can be obtained at Weber's Art Store, Dollar Stores, hardware stores, Canadian Tire stores and The Home Depot.

**Vinyl tubing connectors** can be obtained at Canadian Tire stores and The Home Depot. Pet stores will also be able to provide vinyl tubing used as air hose in aquariums.

**Be Creative!** There are materials that can be used for kites that many kite makers may never have considered. Try them out, experiment, innovate—use your artistic creativity to push the boundaries of kite making to new levels!

## Kite Plans:

Troy Gunn's web site <http://members.tripod.com/~TKOGunn1/kiteplans.htm>

Anthony Thyssen's web site: [www.stwikipedia.org/~anthony/hotlist.html](http://www.stwikipedia.org/~anthony/hotlist.html)

Glenn Davison's web site: <http://miniatures.kitingusa.com/> (Glenn is an expert in mini-kites)

Or you can search via Google using key words: "kite plans".

## Books:

Eden, Maxwell. ***Kiteworks: Explorations in Kite Building and Flying.*** (1989) Toronto & New York: Sterling Publishing Inc.

Eden, Maxwell. ***The Magnificent Book of Kites.*** (1998) [2002 re-issue of Kiteworks in new binding.] Toronto & New York: Sterling Publishing Inc.

Hart, Clive. ***Kites: An Historical Survey.*** New York - Washington: Frederick A. Praeger, Publishers, 1967.

Lloyd, Ambrose & Thomas, Nicolette. ***Kites and Kite Flying.*** (1978) New York and Toronto: Hamlyn Publishing Group Ltd.

Pelham, David. ***The Penguin Book of Kites.*** (1976) London, England: Penguin Books Ltd.

Schmidt, Norman Jacob. ***The Great Kite Book.*** 1<sup>st</sup> Edition (1997) New York, NY. Sterling Publishing Company Inc.

Streeter, Tal. ***The Art of the Japanese Kite.*** (1974) New York: John Weatherhill, Inc.

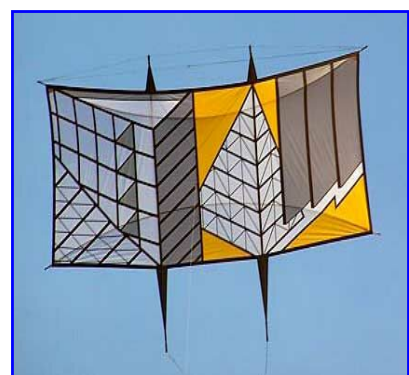
Streeter, Tal; Asker, Curt and Matisse, Jackie. ***Art That Flies.*** (1991) Dayton, OH. The Dayton Art Institute.

Toy, Leland. ***Flight Patterns: A Guide to Kitemaking.*** (Rev. ed.) (1985) Scottsdale, Arizona: Sky High Press.

Tyrrell, Susan. ***Kites: The Gentle Art of High Flying.*** (1978) Garden City, NY: Dolphin Books - Doubleday & Company Inc.

Wright, Chris. ***Kite Flight – Theory and Practice.*** (1998) London, England. Middlesex University Press.

Many of these books are available from on-line sources such as Chapters.com, Amazon.com and ABEbooks.com. Often they are available in used condition for only a few dollars plus shipping.





Prepared for  
Niagara Artists  
Centre

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**About the Workshop Presenter:**

Bob White is a life long student of kites and kite history. His love of kites dates back to his early childhood kite building and flying sessions with his Dad and Uncle who were enamored with things that flew. Bob's passion has extended to collecting old kite books and kite artifacts as well as designing and building his own kites. Bob's written contributions about kite history to numerous kite journals spurred him to create his own web site which has been cited by 'The Drachen Foundation' as a source of accurate information on kite history. A frequent guest at kite festivals and a regular workshop presenter to both experienced and novice kites, Bob is known in the kite community as an ambassador for kiting.



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# Niagara Artists Centre

**Niagara Artists' Centre** is a not-for-profit, charitably registered, member-driven collective formed by and dedicated to serving the working artists and community of Niagara.

Founded in 1969 as a collective of working artists, NAC is one of the oldest artist-run organizations in Canada.



**Mission Statement of the Niagara Artists' Centre:**

Niagara Artists' Company is a not-for-profit, charitably registered, collective formed by and dedicated to serving the working artists and community of Niagara.

NAC provides a forum for the development, exhibition and appreciation of contemporary art by providing facilities, equipment, professional expertise and a supportive atmosphere for arts research, advocacy and dissemination.

NAC believes that the arts and a critical dialogue on the arts are integral to a healthy community.

**Vision Statement:**

NAC is striving to educate and contribute to a community that gets excited about art, that supports and recognizes local artists and cultural institutions, and that understands an investment in the arts is an act of enlightened self interest.

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