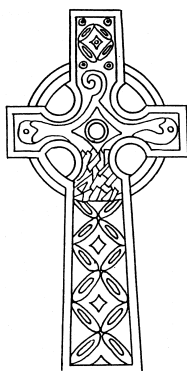


Patrick E.T. Brennen

May 9, 1973 - Feb. 1, 1997





Pasadena Star News, Feb.?, 1997

## OBITUARY

**BRENNEN** — Patrick E.T. Brennan, age 23, was killed in a car accident on February 1, 1997, at 4:00 A.M. The accident occurred on New York Drive between Sierra Madre Blvd. and Altadena Drive. 'Waters on a starry night, Are beautiful and fair; The sunshine is a glorious birth: And yet I know where'er I go, That there has passed away a glory from the earth.' Henry Wadsworth Longfellow; 'Patrick I am not sure you ever realized just how much I loved you. But, every time you hugged me all my other troubles seemed so slight. And that joy will be with me for the rest of my life.' Dad; 'I have lost a friend who always has a place in my heart. It was a pleasure to have known him. I respect him far too much to ever forget him.' David Z.; 'Pat and I talk about the future and about building a new ramp. I smile as Pat and Damon leave in Pat's car, today it makes me cry.' Paul M.; 'Pat was a true friend. You had a passion for life and an unmatched devotion to friendship. You will be greatly missed but never forgotten.' Lyon K.; 'Pat-I have known you for half of my life. We have always been there for each other, for the good, the bad, and all those steps in between. I shall always remember you, and you will never leave my heart.' Ekim C.; 'A security blanket to some, a 'super hero' to others, a celebrity to many, an irreplaceable friend to me. A heart of gold and a passion for life, with all of it's glories. I will always love you.' Damon M.; 'Dear Pat, It's hard for me to accept that you're gone, as it is for everyone else. You were like a big brother to me. I am going to miss you. I'll have you in my thoughts forever. Watching over your family...peace and love.' Jason K.; 'Pat.

accepting the fact that you have gone to a better place satisfies my soul. I hope you are happy. You played a big role in my life and you will never be

forgotten.' Jaime D.; 'I don't think any words can express what my feelings are for you. You are truly the love of my life. You will forever have the key to my heart. I will always yearn to see you again. I love you...always.' Marcela M.; 'I want more than anything to emulate Pat's dedication to the things he loved. I admire him so much and I know that I will never know anyone as great.' Dylan H.; 'When some people become lost or troubled they look to God. If I became lost or troubled I looked to you. You were my guardian angel in life and now in death. I love you.' Eric 'E-Dub' H.; 'Pat you are one of the best friends a man could have and you will be missed. I'll keep it all together for you. I'll see you one day.' Jason B.; 'My love for you grows stronger every day, your every laugh, your every smile. It's hard to believe that a very special part of my life is gone. I miss you already. I cry because I remember every moment that we shared together. This pain I feel is a constant reminder that I will never be able to hold you again. I love you' Michelle L.; 'Patrick was dear friend to all of us. We Miss you.....love you.' Brian and Lori.; 'Patrick you touched everyone so deeply, that your spirit and memories live in us forever. Though now you are in the arms of God, life here will never be the same, without you.' The Landi's; A few words by close friends and family. Patrick, we will all love you....Forever. Closed services will be held February 6, 1997 at Rose Hills Memorial Park.



THE FUNERAL SERVICES  
OF  
**Patrick Edward Theodore Brennen**

WILL BE HELD AT THE  
CHURCH OF THE ASCENSION  
(ON BALDWIN & LAUREL)  
IN SIERRA MADRE, CA.  
AT 1:30 P.M.  
ON  
THURSDAY, FEBRUARY 6, 1997.

FOLLOWED BY  
GRAVESIDE REMEMBRANCE  
HELD IN  
ROSE HILLS MEMORIAL PARK  
(GARDEN OF TRANQUILITY)  
WHITTIER, CA.  
AT 3:00 P.M.

**"Holding you in our thoughts and in our hearts"**

-J.K.

I

am the  
resurrection  
and the  
life



# **A Service Celebrating the Life of Patrick Edward Theodore Brennen**

**May 9, 1973 - February 1, 1997**

*The service for the Burial of the Dead: Rite Two begins on page 491 of The Book of Common Prayer found in the pew racks.*

Organ Voluntaries: Arioso	<i>Bach</i>
Jesu, Joy of Man's Desiring	<i>Bach</i>
Adagio from Moonlight Sonata	<i>Beethoven</i>

Opening Anthems

The Collects

The Readings

Ecclesiastes 3:1-15

Psalm 121 page 473

Revelation 21:2-7

Psalm 23 page 476

John 14:1-6

Homily with remembrances

Silent reflection

Adagio Contabile from Sonata Pathetique	<i>Beethoven</i>
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The Apostles Creed Page 496

The Prayers page 497

Blessing and Dismissal

Organ Postlude: Hymn to Joy	<i>Beethoven</i>
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*The Committal follows today at 3:00 p.m., Rose Hills  
Memorial Park in Whittier.*

### ***The Prayer of St. Francis***

*Lord make us instruments of your peace.  
Where there is hatred, let us sow love;  
Where there is injury, pardon;  
Where there is discord, union;  
Where there is doubt, faith;  
Where there is despair, hope;  
Where there is darkness, light;  
Where there is sadness, joy.*

*Grant that we may not so much seek  
To be consoled as to console;  
To be understood as to understand  
To be loved as to love.*

*For it is in giving that we receive;  
It is in pardoning that we are pardoned;  
And it is dying that we are born to eternal life.  
Amen.*

*February 6, 1997  
1:30 in the afternoon*

*Family*

*Christopher & Doreen Brennen, parents  
Danamichele O'Brien & Katherine Alaama,, sisters*

*Bagpiper at the Cemetery*

*Mr. Dave Champagne*

*Officiant*

*The Rev. Roger Wood*

*Server*

*Mr. Thomas Hawkins*

*Organist*

*Mrs. Tabitha Henken*

*Altar Guild*

*Mrs. Madalyn Spencer*

**The Church of the Ascension Episcopal**

25 East Laurel Avenue  
Sierra Madre, California 91024-1915  
Telephone: (818) 355-1133 (818) 355-8919  
Office Hours: Monday - Friday 9:00 - 2:00

*The Mission of the Episcopal Church of the Ascension is to glorify God through the Christian ministries of prayer, fellowship, education, outreach and tradition by upholding the Word and Sacraments within the rich liturgy and music of the Anglo-Catholic Heritage; and nurturing the health and spiritual growth of individuals and the congregation while providing pastoral care and serving those in our parish, community and beyond.*

Damon McCarthy spoke of Patrick:

Pat Brennen. It's difficult to sum you up in a few words to tell people at services I never imagined.

Last night I sat down and started to write down what I was going to say today. But, then I decided that I've known you so long I could talk about you for hours. Now that I am standing here I can't speak.

I loved you like a brother and will always remember that goofy look you had on your face at 3.55am February 1st as we were kidding around about the night's activities.

You are a part of my life that will never be the same. You and I were like weekend warriors always ready to go out and live life to the fullest. Your charm and attitude got us through so much.

To many you were like a superhero that would fling his cape around us to protect us. But to me you are a brother, a friend, and everything in between.

I remember coming home from school last week and finding him on my couch with something to drink, watching Star Wars, saying "Damn Star Wars is the Bomb".

He used to come to my house and hang out by the pool and just get a tan while my mom was working in the garden. I would get home and my mom would tell me that Pat stopped by and left 3 hours later.

Alot of people thought of him as this big strong guy but to a few of us he showed his valued warm inside. I wrote a poem for my grandfather when he died, that Patrick took a particular liking to. In many ways they were alot alike, strong, sensitive, proud Irish men. So I thought it would be fitting if I read it today.

“Goodnight Sleepwell”

We say to those we love.

And wath their dear faces glimmer on the stair,

And hear faint footfalls in rooms above Sound on  
quiet air.

Yet feel no fear, though lonely they must go

The roads of slumbers strange oblivion.

Dark always fades to dawn

Sleep is so gentle.

And so well we know where ever they have gone

They will be safe until morning light.

“Good Night - Good Night”

“Good Night - Sleepwell Beloveds”

We say to those we love

When the last slow dusk has fallen

And your steps no more make music on the empty  
floor

And day has fully past, we who so lightly let you  
go

Alone.

Evening by evening from trustful sight to the

Mysteries of sleeps unknown.

We need not fear tonight.

Dark always fades to dawn

Death is so gentle

Love will be safe til morning light

“SleepWell GoodNight”.

Patrick E.T. Brennen

I love you and will miss you until

I can see you again

You will always be “Stayin’ Alive”

Your friend, “Brother”

Damon McCarthy

You will be with me for ever. The three *Konji* characters mean: “May we all meet again on the otherside”. A Japanese prayer said by survivors of the Nagasaki bomb to their loved ones that died. This hit me like a bomb and now I am a survivor of a horrific accident as they were so I pledge my prayer to you, Patrick.

Love, Damon.



Marcela Medina:

I wasn't sure what I was going to say today. I just knew I had to say something.

Patrick was such a big part of my life and such a big part in others. He was like no other. I couldn't imagine the world without him. He touched everyone he met and loved everyone who loved him back. I know most of you have known him for a greater time than I. But, in the past few years or so, he and I grew extremely close. He entered my life unexpectedly and just as well left it unexpectedly. He was so many different people to me. He was a friend, a lover, a teacher, a protector, a confidant, a hero, a fighter, a believer, a listener, a leader and most important a soul-mate.

We were so different but yet so much alike. I learned so much from him. But the most important thing I learned was passion. Patrick had a passion for life like no one else I had ever met before. He definitely loved life. He cherished every minute of it. He truly lived it to it's fullest.

There wasn't a day that passed where Patrick wasn't smiling his smile or laughing his laugh. He only wanted to be happy and he was.

I hope you all remember him in a unique way to you. Because he thought about you all in a unique way.

He also had a gift of being successful at everything he wanted. He set a goal, he aimed for it and he achieved it. He was an extraordinary human being. I don't think anyone here will meet anyone like him. I know I won't. He will always live in us.

I've heard through many of his friends and loved ones say he was indestructable. He is. He will always be young. He will always be strong. He will always be beautiful. He will always be intelligent. He will always be remembered. And he will always be in our hearts. That is what he wanted.

Patrick - I love you. I miss you.

Marcela Medina, Feb.6, 1997.



Ekim Cram read from “A Time to Dance” by C. Day Lewis:

For those who had the power of the forest fires that  
burn

Leaving their source in ashes to flush the sky with  
fire:

Those whom a famous urn could not contain, whose  
passion

Brimmed over the deep grave and dazzled epi-  
taphs:

For all that have won us wings to clear the tops of  
grief,

My friend who within me laughs bids you dance  
and sing.

Let us sing then for my friend not a dirge, not a  
funeral anthem,

but words to match his mirth, a theme with a  
happy end;

A bird's buoyancy in them, over the dark-toned  
earth

To hold a sustained flight, a tune sets death to  
dancing;

And a beat as of feet advancing to glory, a little  
emphatic.

In February, a word of hard light,

A frosty welcome, the aconites came up

Lifting their loving cups to drink the sun:

Spring they meant, mounting and more of hope.

And I thought of my friend, like these withered  
too soon,

Who went away in a night

Before the spring was ready, who left our town

For good. Like aconites he pledged the spring

Out of my grief-bound heart, and made me sing

The spirit of life that nothing can keep down.

His laughter was better than birds in the morning:  
his smile

Turned the edge of the wind: his memory

Disarms death and charms the surly grave.  
Early he went to bed, too early we  
Saw his light put out: yet we could not grieve  
More than a little while,  
For he lives in the earth around us, laughs from  
the sky.

Lay laurels here, and leave your tears to dry -  
Sirs, his last wishes were that you should laugh.  
For those in whom was found life's richest seam  
Yet they asked no royalty, one cenotaph  
Were thanks enough - a world where none may  
scheme  
To hoard, while many die,  
Life; where all lives grow from an equal chance.  
Tomorrow we resume building: but this  
Day he calls holiday, he says it is  
A time to dance, he calls you all to dance.



Jason Bertino spoke of Patrick:

From the first day I saw Pat to the last day I was with him. I could tell him by the way he walked or by the way he talked. I mean, if I just saw Pat walking I knew it was him or if I just heard him talking I knew it was Pat. Pat was the best friend a man could ever have. Pat would give you the shirt off his back if it would make you happy and that is all Pat wanted, was for to make you happy. That's just the way Pat was. Pat was at his happiest when all his friends and family were happy. I'm going to miss you my friend, I love you.



Katharine Alaama:

Kathy read:

Now you are in your country,  
And I, locked fast in mine,  
Walk the white road in silence,  
And see my sun decline.

I see the whole west breaking  
In flame again, tonight;  
And earth to peace receding  
Through valleys of delight.

Sleep, in your pleasant country  
lie down at last, content,  
The hills of constant heaven  
Your dream's bright battlement;

Know that the stars you talk with  
Have eyes on fields at home,  
Or buds on banks you dream of  
Now break in scented foam;

For death has hung no silence  
Nor spring withheld one sign,  
Since you turned to your country  
And left me locked in mine.

("Now you are in your country" by Frank Kendor)

V. Katharine Earls Alaama, Feb.6, 1997.

Bill O'Brien spoke and recalled three incidents involving Patrick which had made a strong impression on him. One was an encounter with a group of young skateboarders one day in Philadelphia when they expressed disbelief that Bill was Patrick Brennen's brother-in-law. Another, more recent, example of Patrick's unique view of life occurred during a conversation with him after he received a recent grade report from Pasadena City College. All of the grades were excellent with the exception of basketball where he had received a poor grade. Bill expressed to Patrick his surprise at this flaw, particular since Patrick was an accomplished basketball player and enjoyed the game. Patrick's explanation was that the coach wanted him to run up and down the court rather than just play at one end as Patrick was doing. His reason for this was that he was trying to "bulk up" and running up and down the court would burn off too much mass!

Bill also talked about his wedding to Patrick's sister Dana, which took place in the same Sierra Madre church. He recalled that a part of the concrete pavement outside the Church of the Ascension had been relaid a day or so before his marriage. The concrete had not quite dried when Patrick happened by and so he had inscribed the words "Bill and Dana" with the date of their wedding in small letters at the side of the pavement. There it still stands, an almost permanent record of that joyous day and of the loss we have all suffered with the passing of this free spirit.

Christopher Earls Brennen:

For once I have no words. My handsome and talented son is gone and the world will never be the same. And so I would like to use the words of others. I would like to read two things. First I would like to quote from a letter Doreen and I received from a man who was a second father to Patrick. The last part of the letter reads:

“...there is no arguing with the good lord and he must have needed another angel. He’s got the best. More than anyone I loved Patrick Edward Theodore Brennen. And everytime I feel the warmth of the sun, or hear the rhythm of the wind blowing through the trees - or, for that matter, anytime I see something beautiful or just feel happy - I’ll think of Pat, remember his smile and know that he is with me. Until I take my last breath within me, he will live forever.”

Michael E. Landi

Thank you so much Mike - for everything.

Patrick could be very tough but more and more in recent years there emerged a gentle person at ease with the world and with his friends. In these final hours, the words of William Shakespeare come flooding back to me:

“His life was gentle, and the elements so mixed in him that nature could stand up and say to all the world - there was a man”.





## ARRANGEMENTS FOLDER FOR

PATRICK E. T. BRENNEN

*This folder has been designed to assist you with any questions you may have regarding our services and facilities.*

### Private Visitation Private

(Visitation Rooms are located inside Gate 1 between the Mortuary and Flower Shop.)

Open 8:00 a.m. to 8:30 p.m. Daily

Beginning Date 2/5 Day Wed. Time 5-8:30pm

Ending Date 2/6 Day Thurs. Time 8am-1:45pm

### Private Graveside Service Funeral Services

Place Garden of Tranquility Gate # 1

Date 2/6 Day Thursday Time 3:00pm

Other Service \_\_\_\_\_ Gate # \_\_\_\_\_

Date \_\_\_\_\_ Day \_\_\_\_\_ Time \_\_\_\_\_



3888 South Workman Mill Road  
Whittier, California 90601  
310-699-0921 213-723-5391  
714-739-0601 310-692-9180 (Fax)

EVA TONG  
Arrangements Counselor License # OB88928

Mike Landi, father of Michelle Landi and a second father to Patrick, wrote:

Dear Chris and Doreen

I can only write down these thoughts and hand them to you, because there is no possible way I could express this message without breaking down in tears. This is not an expression of my sympathy to you, but a sharing of sorrow and grief with you, as I loved Patrick as much as I love my own children. I guess, really he was when I think about it, as you know we were very close. We shared many times and thoughts together.

I was very touched by our brief telephone conversation, and you know it was always my pleasure to be with Patrick. He stood out far and above all the other kids.

I must also take this time to thank you as well, for all you have done for Michelle. Your love, caring and guidance has added a great deal to her life and you know how much she loves you all. It may be silly, but it was one of my fondest dreams that someday they would be married.

I saw Pat as a symbol and role model to all his friends, and certainly a leader to all of them. He was an extremely intelligent kid, and that stems from his upbringing and love. You should be so proud.

When a person like Patrick makes such an impression on so many people, it is hard to realize that life can go on for any of us without him. Certainly for me, life has changed drastically, and it will never be the same. I miss him so much already.

I have seen all the sides of Patrick. I've seen him tough as nails, defending his friends, and as gentle and tender as a lamb, teaching Mikie about the care of animals, and scolding him with big brotherly advice.

When a gifted person like Pat has such an effect on everyone's lives, you must believe his spirit is invincible, and his influence and memory can never die. There will not be one hour that goes by that all of us won't have him in our thoughts and prayers. I can see his smile and hear his laugh and voice right now. We can only hope and pray that when we die, the same could be said of us. Life's only real purpose is to make good thoughts and memories, and to love and be loved by others, as Patrick was.

However, as we all know, Patrick was an extremist. He had a passion for pushing things to their limits. He loved going fast through life, and he knew the rules as well as all the consequences. As hard as it is for me to say, I must give him his dignity in that respect, and I will never look down on him for what happened. As cruel as it was. I just wish it could have been me instead of him, as I think I would have through far less pain. But there is no arguing with the Good Lord, and he must have needed another angel. He's got the best.

More than anyone, I loved Patrick Edward Theodore Brennan, and every time I feel the warmth of the sun, or hear the rhythm of the wind blowing through the trees, or, for that matter, anytime I see something beautiful, or just feel happy, I'll think of Pat, remember his smile, and know that he's there with me. Until I take my last breath within me, he will live forever,

Sorrowfully,

Michael E. Landi



Photograph by Alex Osterneck

Alex Osterneck wrote:

My friend Patrick

Patrick Brennen was my friend. I did not really see him very often in our lifetime the way you see some people every day of your life, but his presence and my memories sure make it feel that way. Mostly I saw him over the Holiday season in Sierra Madre and I always looked forward to it. He had a way of making an impression. I can hear his high pitched laugh, like after he would out-roll me with his dice and capture one of my countries during a Christmas time game of Risk. The cheeky smile and the blue eyes looking up at you as if to say I'm lucky and in my world I am King. He would beat me at Risk and other board games no matter how competitively I would try to win, and we were friends.

When I first met Patrick I had heard many funny stories from Kathy and some from Dana. I thought it would be cool to meet this skateboard fanatic from the mountains in LA. I hoped that he would like me because I wanted him to respect me since at that time I was very much in love with his sister Kath. I do not think Patrick liked me when we first met. I was short and broke and I was not Irish and I did not like the rock band House of Pain. "Don't you mess with them, don't make fun of them." I could hear his stern warning, to not put down his music of the moment. This song is awful I thought to myself at the time. You could tell he felt deeply about it. It might seem silly but that conviction is a force that would later be directed in other areas as Patrick matured. I figured I should respect one of Patrick's symbols of adolescent pride, no matter how absurd I thought it was at the time. And so it was that the song "jump around, jump around, jump up, jump up and get down" will always remind me of Patrick. Over time the song wore on me to the point that I actually liked it. Still do. He warned me to respect his music which seemed so ludicrous and over time I found myself actually enjoying it, and we were friends.

As Kathy and I ventured the west coast and east coast we would invariably come upon skateboarders. “Do you know Patrick Brennen?” we would ask. Some did, some didn’t, some became very excited and wide eyed “He’s awesome!” One fan was incredulous that we knew him and demanded I.D. from Kathy to prove that she was his sister. Proof positive that Patrick had achieved skate stardom and true national celebrity in his sport in that being a member of his family was gained you higher social standing! That event gained inclusion into a video. West coast, east coast, most any beach town a lot of skaters knew and were impressed with Patrick. He started to warm to me after these episodes though I was still short, still broke and still not Irish. I knew we were getting closer because he began giving me some of his own skate shirts with his own logo and design. I still wear these shirts five years later. They have taken on different meaning now. It was the early nineties and I was the self appointed head of the Patrick Brennen skateboarding fan club, and we were friends.

I should note that while Patrick skated, he was very much at the tops of his sport/profession. He was essentially one of the very best at what he did. To be the best at something in this life is an honor and very much a rarity. We went skating one day. It was fun. Patrick has awesome moves. I can remember how thrilled I was that he remarked “hey Kath, your boyfriend knows how to skate.” To be recognized as an official boyfriend and as possessing some ability (no matter how little that really was compared to Patrick) in his sport, to me was an overwhelmingly joyous moment. Sort of like the relief and rush you feel when you finally find your car keys after looking for twenty minutes. It makes me feel great to know Patrick gave me that feeling. Might not sound like much but when you want to be liked by another it just feels good to be accepted. This acceptance led us on other ventures. We went to Malibu one day. Patrick didn’t really love the ocean but he body surfed a little anyway. We went to Gladstones. He was joking and smiling like he usually did. On the way home we stumbled upon a huge crowd at UCLA going to the MTV Music Video Awards.

We scalped tickets spur of the moment, got great seats and saw some of our favorite bands play live on MTV. Patrick had a great time. Originally we were to be home early because Chris was arriving from Hong Kong that night. Doreen was not too happy with us either for missing dinner. We had so much fun. On the way home we went to In and Out. For the third time that day. Patrick and I were pretty irresponsible that day, and we were friends.

Kathy had just moved into an apartment in Gladwyne. It was the first night and the electricity had not been turned on yet. We lit candles. Patrick did not like this, he did not like his sister to not have electricity, even if only for a night. This was one of the first glimmers I had of how sensitive Patrick could be and how much he loved and cared about his family. On that visit Patrick and I would hang out together and go out in Manayunk. He had taken a bus out to visit and he did not like the fact that his sisters new apartment did not have electricity for the night. Patrick made it aware to me of the importance of electricity, especially where his sister was concerned, and we were friends.

Patrick and I hung out in Huntingdon Beach. He had come down to visit before Kath and I were off to Catalina for a long weekend. We body surfed the waves on the beach. We hung out at the pool and ate like kings. And we went to the tennis courts. Neither of us was really all that good but we found a way to keep the ball going and have fun. Patrick started serving the ball. As hard as he could. Most times it would rocket into the net or over the fence. He was applying his new found and hard earned muscles to smashing the ball. On occasion it would go ripping by so fast there was no time to get a racquet on it. "Ace!" he would exclaim at the top of his lungs, both arms held high in exultation. Patrick could be so rambunctious at times, but I could fully understand and relate to it, and we were friends.

Chris, Patrick and I drove to the top of one of the highest peaks one day and were dropped off with mountain

bikes to ride down the other side of the mountain trails. What a great time that was. During one particularly hazardous mountain pass, the trail had completely caved in and the three of us had to carry our bikes and selves across a very scary, very deep drop of about forty feet. Chris went first and made it across successfully. Patrick went next but slipped, managed to hang on, but his bike went crashing down the edge. As I watched and stared, I thought Jesus that was close, but there is no way we are getting that bike back. I figured after a close call like that and with the steep angle we would proceed with two bikes, right? Wrong. Patrick, with almost no hesitation shimmies down the treacherous mountainside, grabs the bike in one arm and free climbs back to the main pass where we were waiting. That was a real display and one I will always remember. Moments later as we continued our white knuckle descent down the San Gabriel mountains Patrick under his breath muttered jokingly that it was all my fault that his bike went over the mountain side. He could pull off an unexpected display of courage and then joke about it moments later, and we were friends.

Patrick had an edge. He had a remarkable personality. He was strong yet very sensitive. He was a great looking kid. He was awesome. I think much of what made Patrick so great, so likeable, so fun, stems from the bountiful and differing qualities he got from Chris, Doreen, Dana, Kathy and his extended family. I wish I knew more people like him because in one form or another he almost always made me smile, and I have great thoughts when I think of him. These are just some of the fond memories I have of Patrick. I will miss him. For me, his spirit will live on, and we were friends.

Alex Osterneck  
February 1997





Photograph by John Earls

John Earls, a cousin of Christopher Brennen, whose own brother Patrick Earls was drowned at the age of 20, wrote:

Dear Chris and Doreen

I know there is nothing that can be done to help your shock and grief but we want you to know that we think of you constantly. The shock is the worst part - but, ultimately, in time, the pain goes. I don't know if it will help but in case it does I will share my experience with you.

While I grieved for my parents, I was in both cases prepared in some way. So although I felt a great sense of loss it did not strike me like a physical blow. When Patrick went it was quite different.

I had returned home, parked my car outside the house and can still vividly see my father stumble out and shout at me "Terrible news John - Patrick's dead". I lurched into the house and sank to my knees, leaning against the radiator in the hall. It took me a long time to get over. However, what do I feel now ? No pain, some sadness at a lost relationship, a lost creative person. While Patrick and I did not always agree and had plenty of fights I do not remember the negatives. I think from time to time of

- How pleased he was to be in the Campbell team that won the School's Cup.
- of a discussion he had with his mother as a small boy when she remonstrated with him for always coming home muddy and filthy. He said "Well at least its clean dirt". When he was quizzed about this issue he said "Clean dirt is when you go out clean and come back dirty. Dirty dirt is dirt that you take out with you because you haven't washed."

I have many memories like these ones. I know that in time you will have similar ones of your own Patrick. My

memories of him are positive. I can see him enjoying his bike when Chris and I went to the competition many years ago. More recently I can see him expressing great concern about my visit to the KPMG office in what he considered one of the undesirable parts of LA. He cautioned me about where I should park, how long I should stay, etc. I was very touched by his concern for my welfare.

I know the present is dreadful but the future will have positive memories even if sadness remains. We are all thinking about all of you.

Love

John

Dear Aunt Muriel,

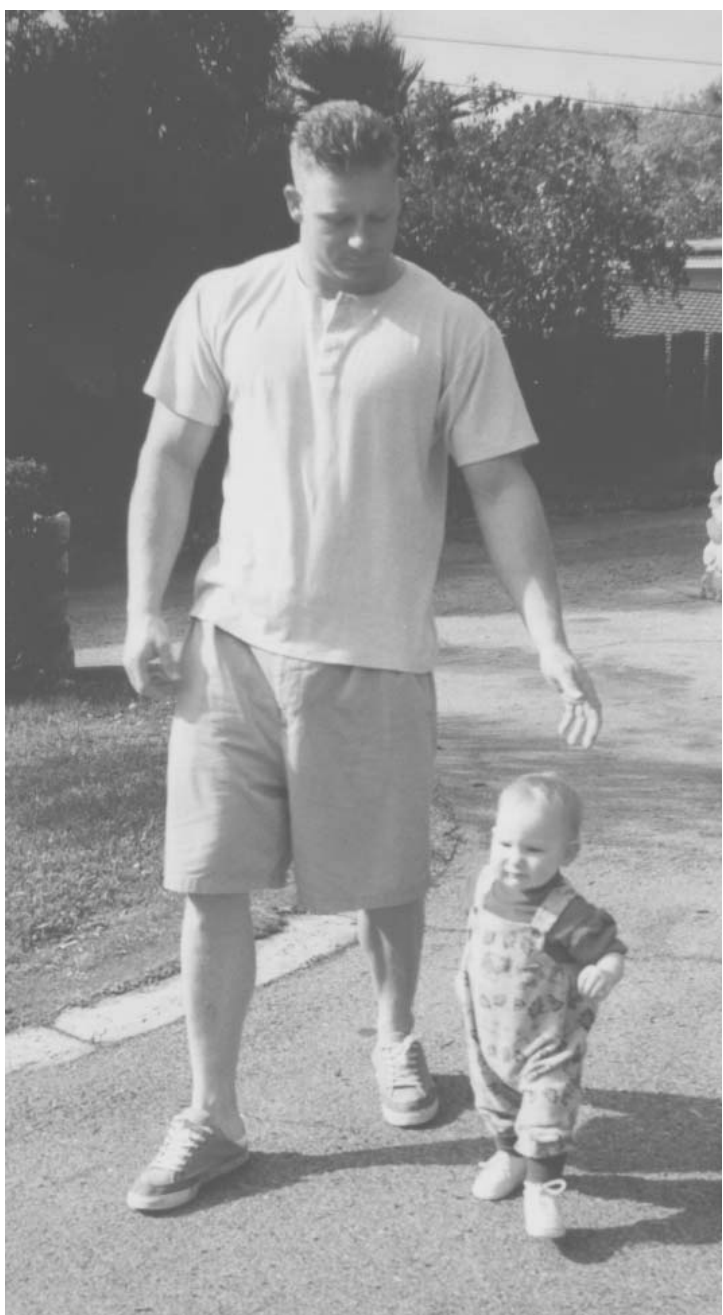
We were very shocked and saddened to hear the news about Patrick. All our family had met and stayed with all the Californian Brennens and, as a consequence, felt a particular bond with them. We all liked Patrick and were especially pleased that he had now an interest in career options. I had visited Pasadena Community College as part of my work - so I knew the environment in which he was studying. When we were in Sierra Madre a few months ago he talked of his interest in psychologys with great enthusiasm.

I was also very touched at his response when I told him that I planned to visit out office in a part of LA he did not regard highly. He counselled me to take great care, not to stay late and to park my car as close as possible and in a recognized car park.

I am sure this was a great shock to you - and we think of you and the Sierra Madre Brennens very much at this time,

With much love

John





## remembrance

PATRICK EDWARD THEODORE BRENNEN

09 May 1973 - 01 February 1997

The Brennen Family

Doreen

Chris

Danamichèle

Kathy

Deeply Appreciate  
Your Thoughtful Sentiments  
Following The Great Loss of  
Our Son and Brother  
Patrick.

While Nothing Can Ever Heal  
The Wound, We Are Comforted  
By The Support  
Of So Many Friends.



We would like to express our heartfelt gratitude to all our dear friends at the California Institute of Technology whose gifts allowed us to set up a Patrick Brennen Memorial Fund at the Caltech Credit Union. This gesture of friendship and of remembrance of our beloved son and brother was most generous and deeply appreciated.

We have given much thought as to how this gift should be used, trying to take into account what Patrick would have wanted. At least part of it will be used to help one or two of Patrick's close friends with their college expenses.



1997 Jan 18 Cucamonga Cyn. w. Reinman (short)  
Mar 1 - Mike w. Garrett + Fabrizio  
Mar 18 → Holland / Magherafelt  
Apr. 5 - Mike w. Marcus → Mt Lukens  
Apr. 12 - Mike w. D. Wales  
Apr → I went to Korea  
Apr. 25 - D. to Philadelphia  
Apr. 29 - Home  
May 3 - Mike on Iron Mt. Ridge  
May 31 - Big Tujunga lake w. Darb  
June 21 - Eaton Canyon hike  
July 9 - Japan  
July/Aug - Australia  
Aug 9 Lower Fox Canyon  
Aug 16 hike / brambles  
23 hike w. D. Wales  
Sep 10 - K. has Huntington Beach  
Sep 13 - Cucamonga Cyn w. Garrett + Simone  
Sep 15 Dana hill  
Sep 26 - Philadelphia (C)  
Oct 5 - Hiking w. Marcus  
Oct 15 - To Boston, Norwich + Phil. w. D  
Oct 25 - Mike w. Garrett + sister  
Dec 13 - B. Tujunga hike.  
Dec 20 - Bailey Canyon w. Garrett + others

# TRAVELS NOW AND THEN

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## NETHERLANDS 1997

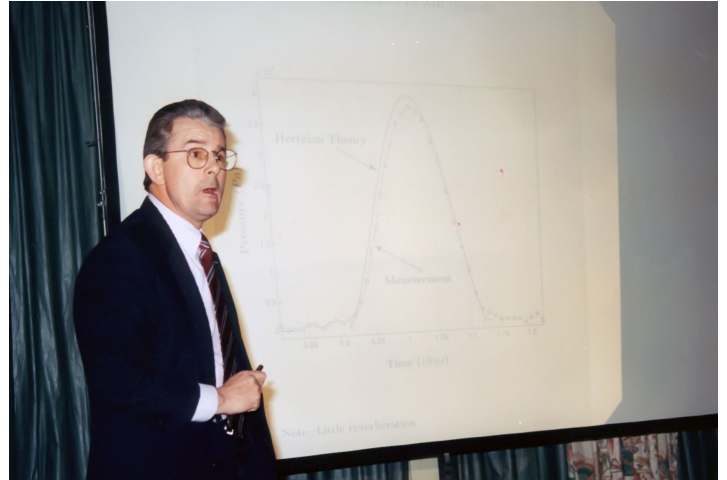
**Tues/Wed. Mar.18/19, 1997**

Fly UA 2 from LAX to LHR

Fly BD 105 from LHR to Amsterdam

Invited lecture at symposium "In Fascination of Fluid Mechanics" in honor of Leen van Wijngaarden, Netherlands, Mar. 1997.

Zenit, R., Hunt, M.L. and Brennen, C.E. (1997). Collisional particle pressure measurements in solid-liquid flows. J. Fluid Mech., 353, 261-283.



*Conference Presentation*

**Mar.??, 1997**

Fly KL 115 from AMS to LHR

Fly BA 4572 from LHR to BFS



*Cranagh Dhu, Magherafelt*





*Cranagh Dhu, Magherafelt*



*First Presbyterian Church, Magherafelt*



*First Presbyterian Church, Magherafelt*



*Colin and sons*

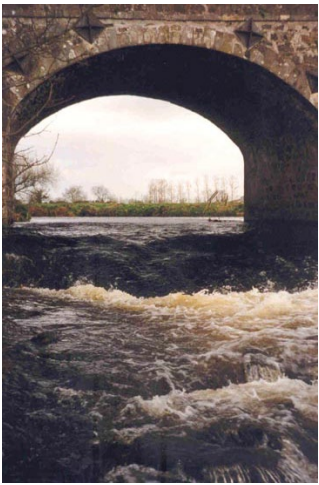


*Sadie Kerr's home, Dungannon*



*Sadie Kerr's home, Dungannon*





*Bridge over the Moyola*



*Bancory House, Helen's Bay*



*Beechmount, home of Mike and Jacqui Mills*



*Lake at Beechmount and Cushendun harbor*

**Mar.27, 1997**

Fly BA 4572 from BFS to LHR

Fly UA 935 from LHR to LAX

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*Last updated 7/30/99.*

*Christopher E. Brennan*



# TRAVELS NOW AND THEN

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## KOREA 1997

**Apr 20 Sun**

Leave LAX 9.20am to SF (UA2014) and to Seoul (UA807)

**Apr 21 Mon**

Arrive Seoul, Korea at 3.50pm on UA807

Met by someone from Seoul Nat. Univ.- will have sheet of paper with my name + will take me to hotel

**Apr 22 Tue**

Lecture and Visit at Seoul National Univ.

Flight Korean Air 1545, Seoul 6.50pm to Pohang 7.50pm

**Apr 23 Wed**

Lecture at Pohang Inst. of Tech.

**Apr 24 Thu**

Flights Korean Air 1538 and 1315. Pohang, 2.40pm, - Seoul - Kwangju, 5.25pm

**Apr 25 Fri**

Hike to Moo Deung San mountain (1200ft) near Kwangju

Mudung-san, Korea, 3892 ft, 4/25/97, Korean students



Climbing Mudungsan.



Climbing Mudungsan.

**Apr 26 Sat**

11.20am-12.10am lecture at KSME Conference, Kwangju

Invited lecture at Spring Annual Meeting of the Korean Society of Mechanical Engineers, Kwangju, Korea, April 1997.

Brennen, C.E. (1997). Some current advances in cavitation research. Proc. Korean Soc. Mech. Eng. 1997 Spring Annual Meeting C, 52-70.

Travel to Taejon (100km from Kwangju) by train or bus (3hrs)  
Met by someone from Samsung

**Apr 27 Sun**

Climbing in ?? National Park with Seung-Joon Lee:  
Kwanumbong, Korea, 2675 ft, 4/27/97, Seung-Joon Lee  
Sambulbong, Korea, 2541 ft, 4/27/97, Seung-Joon Lee

**Apr 28 Mon**

Visit Ship Research Center of Samsung.  
KSIRO and Chungnam Univ. also present.  
Train to Seoul (2hrs)

**Apr 29 Tue**

Flight Seoul, 12.35pm, to LAX, 9.45am on UA876

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*Last updated 7/30/99.*  
*Christopher E. Brennen*

TRAVELS NOW AND THEN

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AUSTRALIA 1997

1997:

- Jul 9 Wed Fly LA to Osaka. UA 817. Leave LAX 11.10am
- Jul 10 Thu Arrive Osaka (Kansai) 3.15pm. To Osaka Univ.
- Jul 11 Fri Visit Mitsubishi, Takasago  
10.30 Arrive 10.30-12.00 Lecture  
14.50 Depart  
Travel Himeji (15.04) - Matsumoto (19.06). Stay Matsumoto.
- Jul 12 Sat Matsumoto- foot of mountain (1.30) by train and bus.  
To top of Yakedake (3.30)  
Top of Yakedake - lodge (0.45)
- Jul 13 Sun Evening: Travel to Tokyo  
Lodge to bus-stop (2.00)  
Busstop-Matsumoto (1.40) by train and bus  
Matsumoto - Tokyo (3.30)
- Jul 14 Mon JSME Conference, Tokyo
- Jul 15 Tue JSME Conference, Tokyo  
Paper: 10.40am Room 409  
Chair: 15.30pm Room 409  
Evening: Banquet
- Jul 16 Wed JSME Conference, Tokyo  
Afternoon and Evening: Furuya + Ohashi at Kogakuin(?)  
  
D:Fly LAX (via SF and Sydney) to Brisbane  
Leave LAX at 7.20pm
- Jul 17 Thu Lecture at CFD seminar, Univ. of Tokyo (Prof. Kobayashi)  
Noon: Train to Sendai. Visit Tohoku Univ.  
Dinner with Kamijo  
Hotel near Sendai Station
- Jul 18 Fri Visit Tohoku Univ. Seminar at 10.00am (Cloud Cavitation)  
Lunch with Kamijo  
Afternoon train to Ueno. Then to Narita.  
Fly Quantas 360, Narita to Sydney, Brisbane. Leave 9.35pm  
  
D:Arrives Sydney 6.35am  
Leaves Sydney 7.55am, arrives Brisbane 9.20am



Jul 19	Sat	C: Arrive Brisbane at 7.20am on Qantas360
Jul 20	Sun	Travel Brisbane to Rockhampton, QU660 8.35am-9.45am. Bus and ferry to Great Keppel Island
Jul 21	Mon	ISSW, Great Keppel Island
Jul 22	Tue	ISSW
Jul 23	Wed	ISSW. Paper
Jul 24	Thu	ISSW
Jul 25	Fri	ISSW
Jul 26	Sat	Ferry to mainland. Rental Car?
Jul 27	Sun	
Jul 28	Mon	
Jul 29	Tue	
Jul 30	Wed	
Jul 31	Thu	
Aug 1	Fri	
Aug 2	Sat	
Aug 3	Sun	Fly Brisbane to LAX. Leave Brisbane 9.05am Arrive Sydney 10.35am, leave 12.20pm. Arrive LAX 8.45am













# The many colours of the Fraser Coast

## A breath of fresh air

This serene little part of the world is made up of pristine islands, the big, beautiful bay, rich rural areas and historic cities. The charming village atmosphere of the coast is something to be experienced. The Fraser Coast is literally a breath of fresh air.

## A natural wonder

Fraser Island is the largest coastal dune system and sand island in the world, being 124 kilometres long, and covering an area of 163 000 hectares. It is listed as a **World Heritage** site for all to appreciate and enjoy.

Nowhere else in the world will you see towering **rainforests** rooted in sand, surviving on the nutrient breakdown of other plants and the vast freshwater lakes and streams that run in abundance.

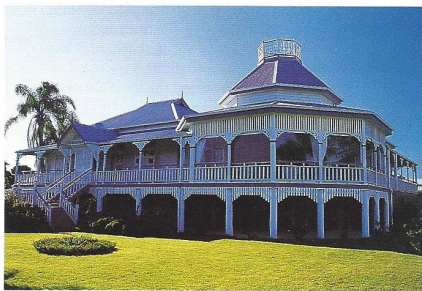
This lush environment houses over 230 species of **birds**, and 25 species of mammals, including **possums**, **dingoes**, **echidnas**, **wallabies** and **flying foxes**. **Dugong** feed on the seagrass beds, **turtles** breed on the beaches, and the magnificent **Humpback whales** pause to play in the warm waters of **Platypus Bay** each year on their journey back to the Antarctic.

More than 50 **ships** and vessels have been wrecked in the waters of Fraser Island, making it another of the many excellent **dive** spots in Queensland. There are no sealed roads on Fraser, but the island is well covered by **four-wheel drive** and walking tracks. You can hire your own 4WD vehicle, or join a safari or guided tour.

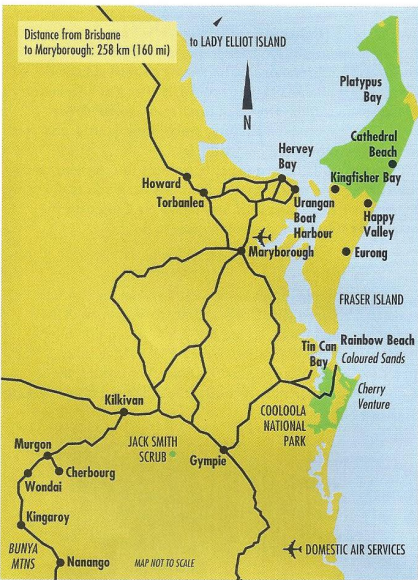
The island offers a variety of places to stay, depending on how much you want to spend, and how close to nature you want to get – from tents to cabins to luxury resort accommodation. There are several **camping** sites, some accessible only by foot or boat. If you are camping, make sure you come well prepared.

Fraser Island offers a wealth of things to explore, whether it be taking in the awesome beauty of the National Parkland on a scenic walk or hike, four-wheel driving across the pristine beaches, or cruising the crystal waters on a whale watching adventure. However you choose to see it, Fraser Island is a natural phenomenon rich in history and culture.

For more information, see the *Reef and Islands* section on page 40 and the *National Parks* section on page 25.



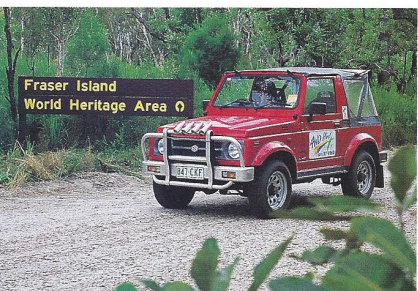
20 In the Heritage City of Maryborough, you can discover Queensland's distinctive architecture.



## The whale watching capital of the world

Hervey Bay is Fraser Island's best access point, and can also boast of being the best vantage point to see the antics of the world's largest mammal. It is also a gateway to Lady Elliot Island. Hervey Bay is famous for its safe, sheltered waters and encompasses the coastal resorts of **Point Vernon**, **Pialba**, **Scarness**, **Torquay** and **Urangan**.

Boating and fishing enthusiasts will be in their element with excellent estuary, beach, jetty and reef fishing. Glass-bottomed boat tours give a good look at the colourful reef life. Then there's snorkelling, diving, water and jet skiing and sailboarding to be tried.



World Heritage listed Fraser Island is one of Australia's great four-wheel drive adventures.

# The many colours of Capricorn

### Where the outback meets the reef

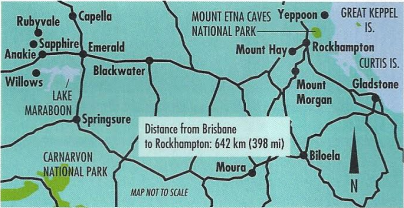
Capricorn extends from the central highland's town of Jericho on the Capricorn Highway to the Great Barrier Reef island of Great Keppel. It straddles the Tropic of Capricorn which is the line of latitude dividing the Temperate and Tropic Zones.

The region is known for its diversity. National Parks, State Forests, craft markets, heritage buildings, island retreats, sandy beaches and international resorts combine to make Capricorn special. Attractions range from the informative to the adventurous, from the mainland to the deep sea.

Home to around 60 000 people, Rockhampton is the capital of Capricorn and also proudly wears the banner of the Beef Capital of Australia. Statues of Santa Gertrudis, Brahman, Braford and Droughtmaster bulls stand at the entrance and exit to the city. North-west of "Rocky" is the quieter, cooler seaside resort of Yeppoon.

The Capricorn Coast is grandly decorated with stretches of sandy beaches, inviting blue waters, the Great Barrier Reef and semi-tropical islands. Creeks and streams are perfect for picnicking beside, Australian flora and fauna are plentiful, and towns boast delightful restaurants, charming accommodation houses and friendly locals.

Capricorn's rural hinterland is a colourful patchwork which showcases the diverse farming, cattle and mining industries. It is an easygoing holiday destination for those who want to experience rural life.



### A gem of a region to visit

There are few parts of Australia where the names of towns and villages truly reflect their character. Emerald, Rubyvale, Sapphire, Anakie and the Willows are the gem fields of Capricorn. Here visitors will find the largest sapphire fields in the southern hemisphere, Australia's largest underground sapphire mine, and walk-in mines offering guided tours. Skilled gem cutters can be observed as they ply their craft, and museums and gem shops boast a magnificent array of sapphires, zircons and other precious gems.

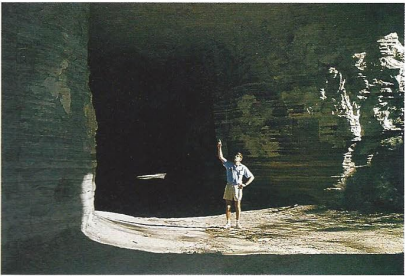
The area abounds in history, and there are many historic sites well worth visiting, including Capella Pioneer Village, the first settlement in the area, and Old Rainworth Fort, where you can tour a historic schoolhouse, storehouse and slab homestead.

The region is also famous for its National Parks which include Carnarvon Gorge National Park - characterised by a deep sandstone gorge draped in lush green palms and ferns, with a number of Aboriginal art sites hidden away on the cliff faces.

For more information, see the National Parks section on page 25.

### Historic Mount Morgan

Mined for nearly 100 years, Mount Morgan's mine sites yielded 247 000 kilograms of gold, 40 000 kilograms of silver and 360 000 tonnes of copper. The site of this open-cut mine is part of a historical tour of the town which includes man-made caves. Mount Morgan was first listed as a Heritage Town by the Australian Heritage Commission in 1980, and then as a Historic Town by the National Trust of Queensland in 1981. Historic sites not to miss include the museum and the railway station, which was established in 1898 and continued operating for 90 years.



Mount Morgan - once a rich mine site - is still a golden place to explore.

### Forget the rest

Just 15 kilometres off Capricorn's coast, Great Keppel Island is one of Queensland's most popular holiday destinations. The island has many areas of fringing coral reef with 28 kilometres of beautiful white sand beaches. The accommodation is first class, the food is mouth-watering, and the activities on and around Great Keppel include scuba diving, snorkelling, golf, water skiing, boom netting, parasailing and even tandem skydiving.

For more information, see the Reef and Islands section on page 40.

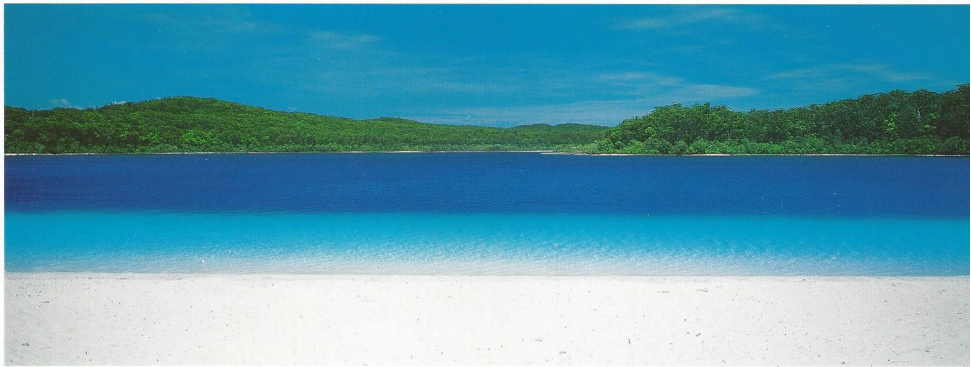


Capricorn is full of fun - you can even make waves with a rubber duckie.





FRASER ISLAND QUEENSLAND  
AUSTRALIA



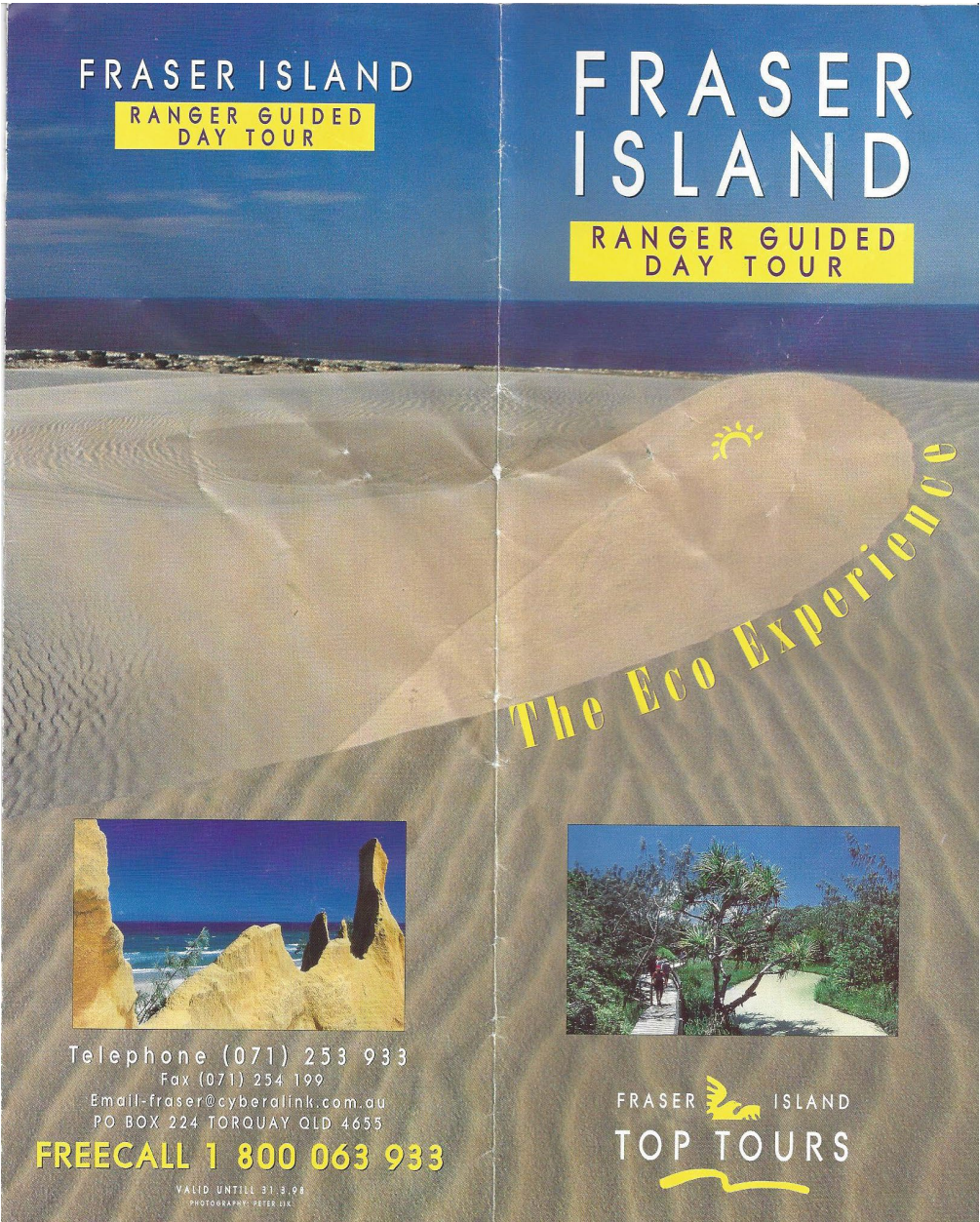
FRASER ISLAND  
QUEENSLAND AUSTRALIA

FRASER ISLAND

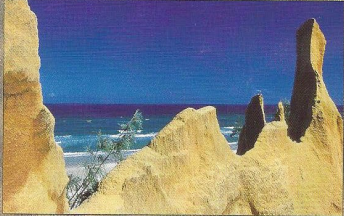
RANGER GUIDED  
DAY TOUR

FRASER  
ISLAND

RANGER GUIDED  
DAY TOUR



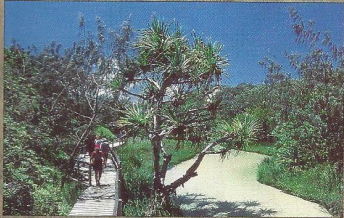
The Eco Experience




Telephone (071) 253 933  
Fax (071) 254 199  
Email: [fraser@cyberalink.com.au](mailto:fraser@cyberalink.com.au)  
PO BOX 224 TORQUAY QLD 4655

**FREECALL 1 800 063 933**


VALID UNTILL 31.8.98  
PHOTOGRAPHY: PETER LUK



FRASER  ISLAND  
TOP TOURS



# The ultimate Fraser experience.



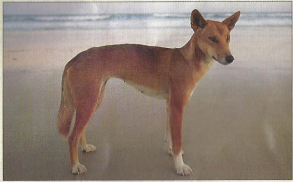
Fraser Island Top Tours have a fleet of comfortable, luxurious 4WD buses designed to offer the best possible ride with excellent vision from our panoramic windows.

Observe Fraser's untamed wilderness, dramatic dunes, sub-tropical rainforests and crystal clear freshwater lakes while learning from your guide the many treasures this island possesses.


Experience our Tour which was a finalist at the 1995 Queensland Tourism Awards and discover this majestic Island with us.

## Join Fraser Island Top Tours for the Eco-Experience of a Lifetime.

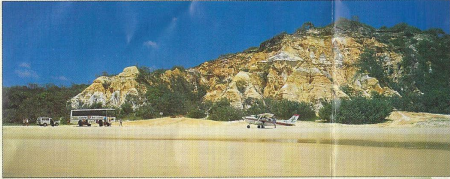
Your trip begins with a courtesy pick-up from your accommodation house that will take you to Urangan Boat Harbour where your adventure is set to begin.



The treasures this island offers are endless...



The award winning Fraser Island Restreat is the ideal location to




Enjoy the magnificent views the Great Sandy Straits have to offer and sit back, relax, and enjoy the informative commentary from our fully-trained guides as they share their expert local knowledge of the region.


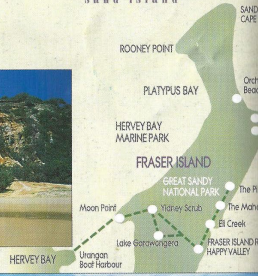
Browse through memorabilia of the Maheno and Marloo shipwrecks or purchase that special souvenir for those not lucky enough to explore this picturesque island.

Marvel at the sand formations of the Cathedrals as they're sculptured by time and swim in the pristine waters of Eli Creek or Lake Garawongera.

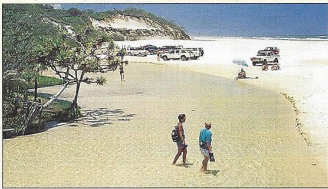
Enjoy a tranquil rainforest walk through Yidney Scrub amidst towering satinays and kauri pines and observe the abundant



### Discover the beauty of the world's largest sand island



Ideal backpacking safari.



Explore the world's largest sand island with the award winning Top Tours team.

This safari will include quad-share accommodation at Happy Valley (sleeping bag required), with all of your meals catered for, leaving the relaxing completely up to you.

Every Tuesday, Thursday and Saturday, departing from the Urangan Boat Harbour, join the overnight experience of a lifetime.

Your adventure will begin with courtesy pick-ups from all Hervey Bay accommodation. The next two days will be spent onboard our luxury 4WD Mercedes Benz Unimogs with numbers restricted to ensure your safari is kept at a personal level.

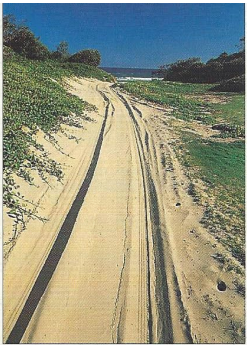


Both the Northern and Southern end of Fraser Island will be explored enabling our passengers to discover the breathtaking scenery our World Heritage Listed Island has to offer.

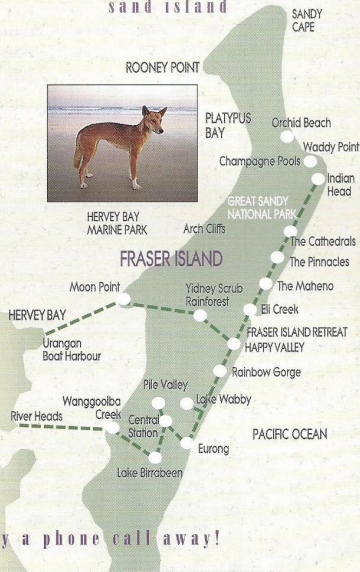
Your Eco-Guides knowledge of Fraser Island is unmatched ensuring your 2 days exploring our island nothing is missed.

Take the opportunity to experience this World Heritage wonder and swim in crystal clear freshwater lakes, walk along rainforest tracks, visit the Maheno Shipwreck and the spectacular Indian Head and Champagne Pools.

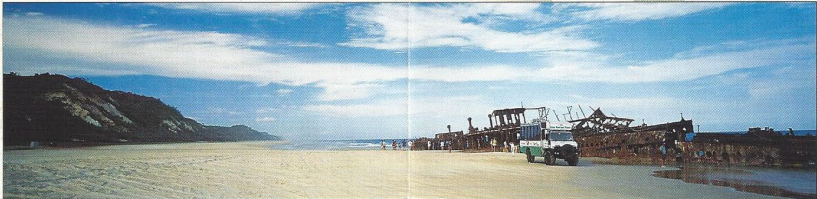
Observe first hand the native wildlife and pristine beaches Fraser Island has to offer and you'll understand why our island is World Heritage Listed.



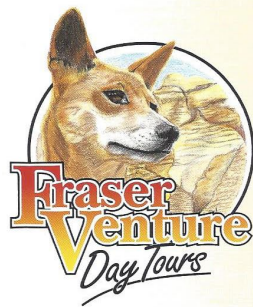
Discover the beauty of the world's largest sand island



The Experience of a Lifetime is only a phone call away!

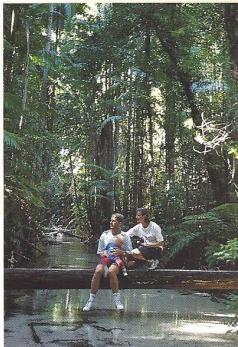






*First established  
tour with the pick  
of the beauty  
spots*

Your FRASER VENTURE DAY TOURS shows you the highlights of world heritage. Fraser Island's amazing variety of landscape: long surf pounded beaches, luxuriant rainforest, pristine freshwater lakes, windsculpted sand cliffs in shades of red, orange and yellow, vast desert like sand blows, winding streams, heathlands brilliant with spring wildflowers and forest clad dunes rising to 240 metres, among the highest in the world.



Wanggoolba Creek

Your tour begins with a courtesy bus pick up in Hervey Bay starting at 8 am. It takes you to MARY RIVER HEADS, with a panorama of the Sandy Straits on one side and the massive mouths of the Mary and Susan Rivers on the other to catch the FRASER VENTURE ferry.

In just half an hour, the shortest crossing time of any vessel from Hervey Bay - allowing you maximum time on Fraser - the Venture lands on the island's west coast. The crossing is in the calmest, most sheltered waters of the Sandy Straits. You then board one of the largest fleet of 4WD coaches in Australia.



Eli Creek



Maheno

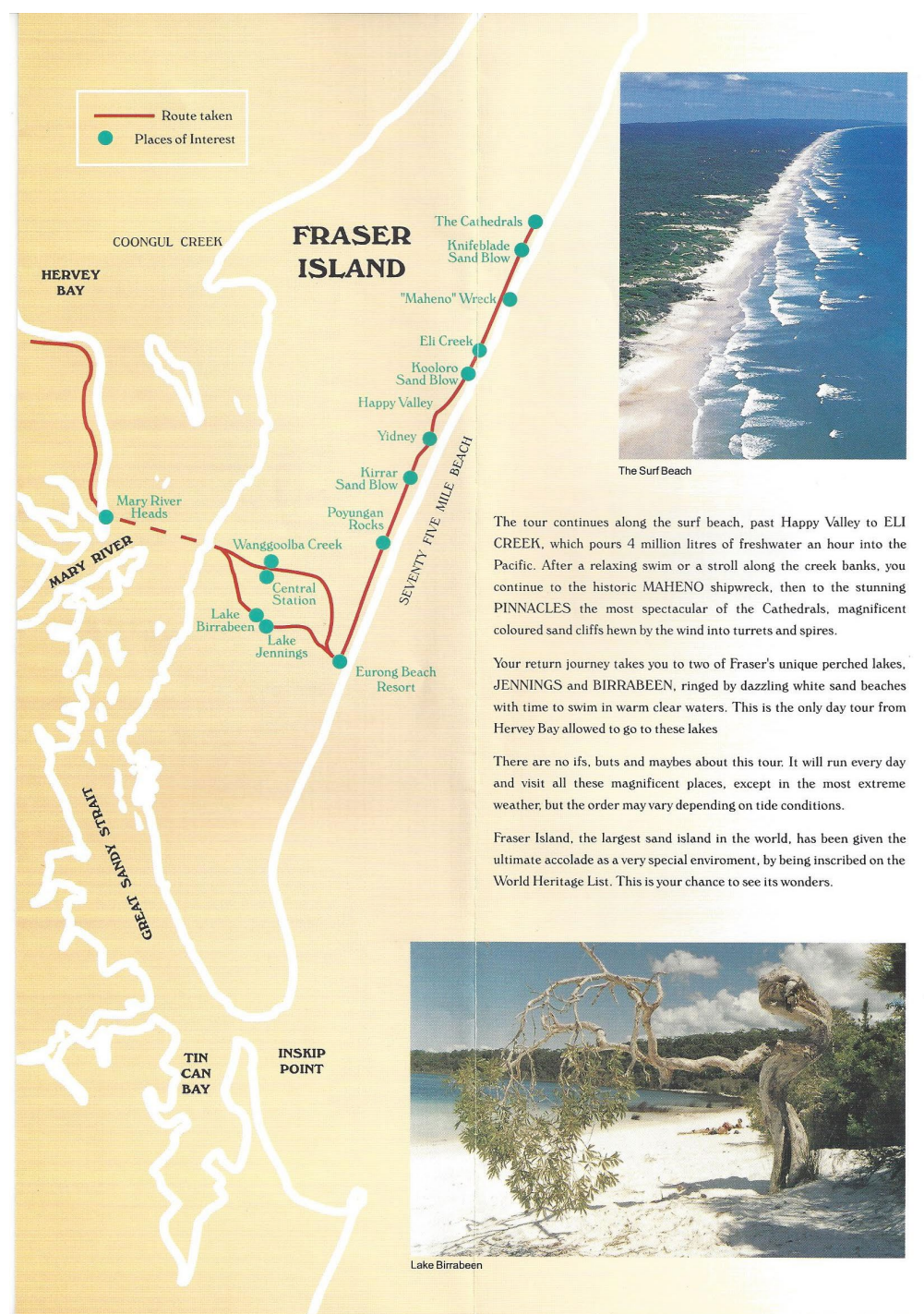
Ten minutes later you are in the heart of Fraser Island's amazing rainforest, the most luxuriant in the world growing entirely in sand. You stop at CENTRAL STATION FOREST PARK and information centre and your guides lead you on a walk along the palm and fern studded banks of WANGGOOLBA CREEK, the most outstanding of Fraser's rainforest beauty spots.

You continue through the forest to EURONG BEACH RESORT, the only resort on the absolute frontage of Fraser's 160km long surf beach. Your chicken, salad and champagne lunch is served in the dining room, where you may watch a prize winning film on the island. You may wish to shop for souvenirs, T-shirts or just an ice cream, or take an optional scenic joy flight with AIR FRASER ISLAND.



The Pinnacles





The tour continues along the surf beach, past Happy Valley to ELI CREEK, which pours 4 million litres of freshwater an hour into the Pacific. After a relaxing swim or a stroll along the creek banks, you continue to the historic MAHENO shipwreck, then to the stunning PINNACLES the most spectacular of the Cathedrals, magnificent coloured sand cliffs hewn by the wind into turrets and spires.

Your return journey takes you to two of Fraser's unique perched lakes, JENNINGS and BIRRABEEN, ringed by dazzling white sand beaches with time to swim in warm clear waters. This is the only day tour from Hervey Bay allowed to go to these lakes

There are no ifs, buts and maybes about this tour. It will run every day and visit all these magnificent places, except in the most extreme weather, but the order may vary depending on tide conditions.

Fraser Island, the largest sand island in the world, has been given the ultimate accolade as a very special environment, by being inscribed on the World Heritage List. This is your chance to see its wonders.

[Fraser Island](#), the island of sand, lies off the coast of Queensland, Australia, about 120 miles north of the city of Brisbane. It is the largest island in the world composed entirely of sand and has a structure that is the result of a huge supply of coastal sand combined with an unrelenting onshore breeze. These have created one of the longest beaches in the world, stretching almost unbroken for 75 miles along the east coast of [Fraser Island](#). In a process of evolution that still continues, the on-shore wind then carries this sand up onto a whole series of patches of sand dunes called "sandblows" that stretch inland from the eastern shore. The sandblows are of the order of a mile in width and several miles long. On each, the sand builds up into dunes that move eastward raising the height of the land to over 700ft; these sand mountains drain to both the east and the west. As sand piles up on the beach, this process also results in new land added to the eastern side of the island. In between the sandblows are old dune fields that have been overgrown by brush while the old sand land to the west has been covered by older brush and forest. In places the result is open sandy scrubland; in other places it is now dense rainforest. The western coast, sheltered from the Pacific surf and storms, is relatively stagnant, in places dense mangrove swamp, in other places lined with soft beaches. In the central and western parts of the island there are many beautiful, clear water lakes, formed where the drainage has been interrupted by the travelling sand. And everywhere the streams consist of the clearest water flowing over sparkling sand beds with little rock to be seen anywhere. Indeed the absence of rock and stones underfoot or underwater, is just one of the features that make this a very special place, fully deserving its designation as a World Heritage Site.



*The eastern coast of Fraser Island.*



*Rainforest on Fraser Island.*

The wilder northern half of the island is now the Great Sandy National Park; the southern half is managed by the Queensland government as Fraser Island Recreation Area. Vehicle access and camping are by permit only. Visitors either arrive on guided tours in four wheel drive buses or in their own (or rented) vehicles. Buses and cars alike drive off the ferry onto the western beach and thence onto the system of rough dirt roads that are the main thoroughfares on the island. In addition, the long eastern beach makes for excellent driving and is the main north/south artery. A network of trails also allows exploration beyond the limits of the rough dirt roads (see [Mark Moxon's hiking saga](#)).

The first European to encounter Fraser Island was probably the Portuguese explorer de Menonca who sailed this coast in 1521. During the subsequent 250 years, only occasional adventurers, Portuguese, Dutch and English, came this way leaving little trace and few chronicles. It was first documented in detail by James Cook, who landed on the island (which he thought was part of the mainland) in May 1770 and named many of its prominent features. The pace of exploration increased after Cook; Matthew Flinders landed near the northern cape in 1802 and others followed. The island became notorious in the aftermath of the adventures of James and Eliza Fraser.

In May 1836, the brig "Stirling Castle", Captain James Fraser in command, set sail from Sydney for Singapore. A week later it was wrecked on a reef off what is now Rockhampton to the north of Fraser Island. Taking to the boats, the survivors, including Captain Fraser and his wife Eliza, drifted south for several weeks, eventually landing on what is now known as Fraser Island. There they resorted to walking south but were taken prisoner by a group of aborigines who stripped them naked and made them work. Captain Fraser was speared and died of his wounds several days later. During a two month sojourn on Fraser Island, other members of the group died or were killed. [Eliza Fraser](#) and the first mate, Brown, eventually escaped with the assistance of one of their captors (probably an escaped convict by the name of David Bracewell who had been living with the tribe). In the aftermath, Eliza's story was widely circulated. She made many public appearances, retelling her story in a more and more graphic detail with each repetition. As a result, the island gain notoreity and was thereafter known as Fraser Island.

The aborigines, a tribe called the Butchulla, had traditionally visited the island on a seasonal basis. In the 1860s they were forced out by the lumber companies who came to harvest the trees of the island's rainforest. That harvest included the valuable satinay trees which had proved quite resistant to the marine pest that destroyed the ships hulls of the day by boring through the wood. Logging on Fraser Island did not finally cease until 1991.





*The bus drives from the ferry onto the west coast beach of Fraser Island.*



*A sand goanna at Lake Garawongera*

We had travelled to Hervey Bay to visit this unique island of sand. A regular bus collected us from our hotel early one July morning in 1997 for the brief trip to the Urangan boat harbor. There, along with the four wheel drive bus that was to provide our transportation for the rest of the day, we boarded the ferry for the brief voyage to Fraser Island. The ferry, which was built just like a landing craft, headed north before turning east and approaching the beach at a place on the west coast of Fraser Island just north of Moon Point. There the ferry simply lowered its ramp onto the soft sand beach and the 4WD bus drove down the ramp onto the beach and across it into the scrub forest. We followed on foot and boarded the bus for the cross-island drive.

The sandy road was rutted by regular traffic so the bus bumped and lurched its way along, first across flat terrain coated with strange and wonderful scrub. Gradually the forest thickened with larger and larger trees creating a canopy with a lush undergrowth below. Here the runoff from the high dunes to the east has created a network of crystal streams and clearwater lakes edged with the purest sand. It is the absence of earth and mud that makes this land so strange, so magical. We passed through the Yidney Scrub, home to great stands of virgin Kauri pine, the trees so sought after by the ship-builders for their resistance to marine life. And we took a short side trip to visit Lake Garawongera, one of those pristine lakes. A sand goanna was primming itself on the lovely beach when we arrived and only reluctantly decided that the crowd was more than it could tolerate. Our guide recommended that we wash our gold jewelry in the sand by the edge of the lake and the lustre of Doreen's gold ring did seem to rise. Back in the bus we drove the last of the 15 miles from our landing beach at Moon Point to Happy Valley, a rustic resort close to the great eastern beach where signs strongly discourage feeding the dingoes who have become persistent pests. There we lunched in the open-air restaurant.



*Eli Creek*



*Swimming Eli Creek*

Refreshed, we mounted our 4WD wagon for the afternoon tour. The bus made its way onto the packed sand of the great 75-mile beach and we were soon sailing smoothly along toward the north in a style in stark contrast to the morning's bump and grind. In no time we covered the 4 miles to where a substantial stream, Eli Creek, empties into the ocean. A delightful trail meanders inland alongside Eli Creek, allowing one to enjoy the lush tropical forest of banksia and pandanus trees fed by the water of the creek. But the crystal stream devoid of any mud or rocks allows an even more delightful experience, namely a swim down the last halfmile or so of creek. With only fine sand on the streambed there was no danger of scraped knees or toes despite the shallow depths. The sparkling clear water and the lush foliage made this a quite unique experience. I could not resist a second descent.

A couple of miles further north we came to the wreck of the "Maheno", a rusty skeleton lying partly buried in the 75-mile beach. More than 50 vessels have foundered on the shores of Fraser Island; indeed the wreckage became of such concern that, in 1870, a lighthouse was constructed at Cape Sandy on the northern tip of the island. But even with the lighthouse, wrecks still occurred. Today, the most visible is the "Maheno", a former luxury liner and World War I hospital ship. In 1935, it was being towed to a scrapyard in Japan when it was blown ashore in a storm. To add to the indignities, it was used for target practice during World War II. Further along the beach, some three miles north of Waddy Point, an Italian luxury yacht, the "Marloo", became beached in 1914 after encountering rough currents on Sandy Cape Shoal. It now lies beneath the surface of the water where it is a favorite dive site.



*The wreck of the "Maheno"*



*The depot for Air Fraser Island*

As we were inspecting the "Maheno" we were amazed to see two light planes approach and land on the beach just a few yards from where we were standing. The pilots disembarked and approached the crowds around the "Maheno". It transpired that they were seeking passengers for "Air Fraser Island" and offering a brief aerial tour of the island. I could not resist and soon, along with two other passengers, I was roaring along the beach in a Cessna flown by a wizened bush pilot, reputedly the best in the world. No sooner were we aloft than we veered over the ocean looking for sharks. Many seemed to be lazily patrolling the shoreline perhaps seeking Eli Creek descendents who had failed to stop at the beach! Then we turned inland for a close aerial view of the Knifeblade sandblow, one of those great moving dunes that had built the island. Further west we had a good look at the inland lakes and streams before turning for home. It was a special thrill to sweep down and land on the beach, the surf almost within arm's reach.

But the hours of daylight were dwindling and after a brief stop to see the rain-sculpted cliffs known as "The Pinnacles" we began the long drive back across to the west side of the island. There the ferry was beached, ready and waiting for the bus to cross the sand and drive up the ramp. Soon we were chugging back to Urangan boat harbor.

It had been a special day on a unique island, a naturally crystal place of bright sand, sun and surf. I felt like an interloper, especially in the great 4WD Mercedes bus. Maybe only people like Mark Moxon should be allowed there. But that would be to deny so many a glimpse into another, different and pristine world.

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*Last updated 7/30/99.  
Christopher E. Brennan*



# TRAVELS NOW AND THEN

© Christopher Earls Brennen

## JAPAN AND AUSTRALIA 1997

### Jul 9 Wed

Fly LA to Osaka. UA 817. Leave LAX 11.10am

### Jul 10 Thu

Arrive Osaka (Kansai) 3.15pm. To Osaka Univ.

### Jul 11 Fri

Visit Mitsubishi, Takasago

10.30 Arrive 10.30-12.00 Lecture 14.50 Depart

Travel Himeji (15.04) - Matsumoto (19.06). Stay Matsumoto.



*Visit to Mitsubishi, Takasago*

### Jul 12 Sat

Visit to Mr. Oka's home

Travel to Matsumoto- foot of mountain (1.30) by train and bus.

To top of Yakedake (3.30)

Top of Yakedake - lodge (0.45)



*At Mr. Oka's home near Osaka*



*At Mr. Oka's home near Osaka*

**Jul 13 Sun**

Evening: Travel to Tokyo  
Lodge to bus-stop (2.00)  
Busstop-Matsumoto home (1.40) by train and bus  
Matsumoto home- Tokyo (3.30)

**Jul 14 Mon**

JSME Conference, Tokyo

**Jul 15 Tue**

JSME Conference, Tokyo  
Paper: 10.40am Room 409  
Chair: 15.30pm Room 409  
Evening: Banquet

**Jul 16 Wed**

JSME Conference, Tokyo  
Afternoon and Evening: Furuya + Ohashi at Kogakuin(?)  
D:Fly LAX (via SF and Sydney) to Brisbane Leave LAX at 7.20pm

**Jul 17 Thu**

Lecture at CFD seminar, Univ. of Tokyo (Prof. Kobayashi)  
Noon: Train to Sendai. Visit Tohoku Univ.  
Dinner with Kamijo  
Hotel near Sendai Station

**Jul 18 Fri**

Visit Tohoku Univ. Seminar at 10.00am (Cloud Cavitation)  
Lunch with Kamijo  
Afternoon train to Ueno. Then to Narita. Fly Qantas360, Narita to Sydney, Brisbane. Leave 9.35pm  
D:Arrives Sydney 6.35am Leaves Sydney 7.55am, arrives Brisbane 9.20am

**Jul 19 Sat**

C: Arrive Brisbane at 7.20am on Qantas360



*Earls family gathering.*



**Jul 20 Sun**

Travel Brisbane to Rockhampton, QU660 8.35am-9.45am.  
Bus and ferry to Great Keppel Island



*Great Keppel Island.*

**Jul 21 Mon**

ISSW, Great Keppel Island

**Jul 22 Tue**

ISSW

**Jul 23 Wed**

ISSW. Paper

**Jul 24 Thu**

ISSW

**Jul 25 Fri**

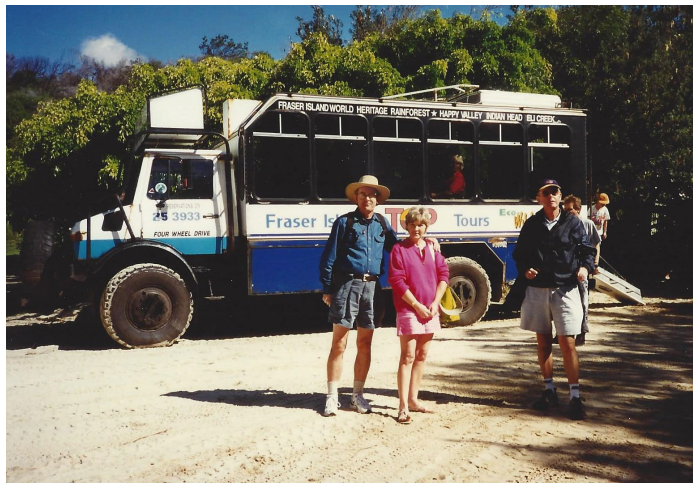
ISSW

**Jul 26 Sat**

Ferry to mainland.

**Jul 27 Sun**

**Jul 28 Mon**



*Fraser Island trip.*





*Fraser Island trip.*



*Fraser Island trip.*

**Jul 29 Tue**



*With Brunellos near Brisbane.*



*National Park.*

**Jul 30 Wed**

**Jul 31 Thu**

**Aug 1 Fri**

**Aug 2 Sat**

**Aug 3 Sun**

Fly Brisbane to LAX. Leave Brisbane 9.05am Arrive Sydney 10.35am, leave 12.20pm. Arrive LAX 8.45am

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*Last updated 7/30/99.  
Christopher E. Brennan*



40, Deramore Drive  
Belfast  
BT9 5JR

27th June 1997

Dear Chris,

Thank you for your note. I really must get E-mail installed so that we can communicate more efficiently!!

I have spoken to Mum about our suggested arrangement for her house and she is happy that we proceed. I have asked Mum to get an evaluation done by one of the local estate agents ( realateurs !!!! ) and I hope that you will be happy to agree to his price.

Next I will obtain the funds and arrange the transfer according to your instructions. Mum will make the necessary adjustment to her will through Roger McLarnon.

If you would like to arrange a written agreement through Roger then I will do so. I will be in touch as soon as a price and funds are arranged. There will be a little delay due to holidays etc.

We are extremely grateful to you and Doreen for helping Deborah with her travel arrangements and for putting her and Suzanne up in Los Angeles. It has been very reassuring both for Deborah and for us to know that she has a friendly base to work from. Without your help I don't know how she would have managed on the west coast.

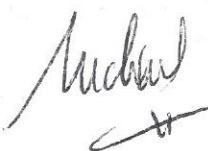
Les and I had a long weekend in Paris in June- she really loves it. We like to do something new each time we are there and we were able to find two relatively small exhibitions of art that we had not seen before. One was Claude Monet's work in the Musee Marmottan close to the Bois de Boulogne. It was very well 'hung' and very relaxing to view. The other was a new display of Salvador Dali's work - both painting and sculpture near the Place du Tertre in Montmartre. We also saw inside the Paris Opera for the first time

Next week we leave for Boston where Deborah will join us on 7th July.

Kylie has just finished her first year at Heriot-Watt and has enjoyed it a lot. Natasha has got a 3rd year Senior House Officer post ( 'Resident' ) back at the Department of Obs and Gynae at the Royal Victoria Infirmary in Newcastle - where she will be working in the infertility department. She starts her new job in August.

I will be in touch again soon

Yours,



CALIFORNIA INSTITUTE OF TECHNOLOGY  
PASADENA, CA 91125

David Baltimore  
President

November 3, 1997

Dr. Christopher E. Brennen  
360 Olive Tree Lane  
Sierra Madre, California 91024

Dear Chris:

Following up on our conversation last Thursday, I am delighted to offer you the position of Vice President for Student Affairs at the California Institute of Technology, effective January 1, 1998. This offer is subject to the approval of the Board of Trustees; but, I have no doubt that they will enthusiastically endorse your selection for this important post. In deference to the trustees, however, I would like to postpone any public announcement until the board has the opportunity to vote on your appointment on December 2.

The Vice President for Student Affairs has traditionally been a half-time responsibility at the Institute for a member of the faculty. As we discussed, I am certainly open to your devoting a greater proportion of your time to the position. I anticipate that over the coming months, as we both become more familiar with the duties and responsibilities of the office, we will jointly determine the appropriate allocation of your time. I look forward to discussing this further with you.

This appointment is for a five-year term. In January, 2002, I will initiate a review of the Vice President for Student Affairs. The findings of the review team will form the basis for our negotiations regarding the continuation your appointment.

When you assume this appointment, your current salary of \$145,000 will be augmented by a \$20,000 administrative increment. A relatively new policy permanently vests 10 percent of this administrative increment back to you for each year's service as Vice President for Student Affairs.

- *Example:* If you were to step down as vice president at the conclusion of this original five-year term, your salary would be calculated as follows: As in the past, the \$20,000 administrative

Dr. Christopher E. Brennen  
November 3, 1997  
Page 2

increment would be subtracted from your current salary. The vested portion of your stipend (50%—10% for each five years of service) would then be added back to your adjusted salary.

As we agreed, the Provost will establish an annual discretionary research pool that will support your research activities while you hold the office of Vice President for Student Affairs. This research pool will be funded at a level equivalent to the annual stipend for a graduate student.

In addition to the above, your appointment as Vice President for Student Affairs will have some impact on your employee benefits; and Sharon Borbon will be pleased to clarify those changes for you.

Chris, I'm so glad that you are willing to accept this position. I look forward to working with you to make Caltech an even friendlier and more effective teaching institution.

Sincerely,

A handwritten signature in blue ink, appearing to be 'David Baltimore', with a stylized, cursive script.

David Baltimore

cc: Steven E. Koonin  
Gordon E. Moore

# CALIFORNIA INSTITUTE OF TECHNOLOGY

DIVISION OF ENGINEERING AND APPLIED SCIENCE

Department of Mechanical Engineering

Christopher E. Brennen  
Professor and Executive Officer  
of Mechanical Engineering  
Mail Code 104-44, Caltech, CA 91125  
Tel: 626-395-4117  
Fax: 626-568-2719  
e-mail: [brennen@ccosun.caltech.edu](mailto:brennen@ccosun.caltech.edu)

November 11, 1997

David Baltimore  
President  
California Institute of Technology

Dear David,

Thank you very much for your letter of Nov.3, 1997, and for your words of encouragement. It is a great honor and privilege for me to be asked to serve the Institute and the students as the next Vice-President of Student Affairs and I am delighted to say that I accept the terms which you laid out in your letter.

I look forward to the opportunity to work with you and the other members of the administration.

Sincerely,

Christopher E. Brennen





UNIVERSITY of LIMERICK

O'ELSCOIL LUIMNIGH

Edward M. Walsh  
President

Dear Chris

A brief note to express much appreciation  
for the wonderful programme you and Bob  
organised for us. It was a great pleasure  
to be at Caltac & gain some insight into  
your research endeavours & campus life.

The dinner was a memorable occasion &  
Stephen & I look forward to welcoming you &  
Doreen to Limerick. Best wishes,

Limerick, Ireland. Tel. +353-61-202021 Fax. +353-61-330027  
Email:edward.walsh@ul.ie Web:<http://www.ul.ie/>

EJ  
14 Oct 97



# DIROLL

■ His Erin never goes Bragh-less! **Bob O'Rourke**, Caltech's irrepressible public relations director, would never allow an Irish visitor on the campus without *Céad mile Fáilte*, "a hundred-thousand welcomes."

When **Stephanie and Ed Walsh**, president of the University of Limerick (UL), came to town earlier this month "O'Rourke cranked up his Hibernian Rolodex for a gathering of the local clansmen. Granted, the rarefied air of the Athenaeum library is hardly the place for a hooley, but, that's exactly what took place on Oct. 13. A bonafide Irish hooley has music and dancing, of course. This one didn't — and a good thing, too. The Irish would never have gone home.

It only takes a wee drop of Tillamore Dew to start the blarney flowing in this crowd. But the evening did have a serious purpose.

Walsh is "the man who personifies Limerick's renaissance," according to Gerald Flynn of the Irish Independent. Soon to retire, Walsh is credited with building the school, located on the banks of the Shannon, into an institution of international reputation. In 1972, UL started with 11 faculty staff and 113 students. It now has 9,400 students and 735 faculty members.

"When I hear the name 'Caltech,' I genuflect," said Walsh, a native of Cork who earned his doctorate in electrical engineering at the University of Iowa. Clearly a man with a mission Walsh came to Pasadena to tour the Caltech labs, powwow with students and explore the possibility of an exchange between the two institutions.

Truly a Renaissance man, Walsh is an accomplished musician (violin and piano) a registered silversmith and an ardent champion of arts education — which tends to twist the knickers of his "techie-type" colleagues at UL.

Among the attendees was journalist **Liz Shannon**, who came from Boston for the event. The widow of former Ambassador to Ireland **William Shannon**, she authored "I Am of Ireland," a moving collection of interviews with women of Northern Ireland; also there were **Pam and Ed Lewis**, Caltech Nobel in genetics who noted: "I started studying the fruit fly when I was 16 years old. It took me 63 years because I'm not Irish."



Photo by RAUL ROA

**RICHARD AND VIRGINIA MACKAY**, left, and Clara and Jacob Maarse were welcomed to the YMCA's Second Annual Spirit of Pasadena Awards by John Naber. The event honoring Jacob Maarse and the Santa Anita Foundation was held Oct. 15.



Photo by RAUL ROA

**CALTECH PROFESSOR** Chris Brennen and his wife Doreen, left, journalist Liz Shannon and Stephanie and Ed Walsh, president of the University of Limerick, at the dinner honoring Walsh held Oct. 13.



Photo by LEE SALEM

**GEOFFREY FONTAINE**, left, new executive director of the Pasadena Symphony Orchestra, Phil Sotel, gala co-chair and Ann and Mike Morris were among the attendees at the opening night of the orchestra's 70th season at the Pasadena Civic Auditorium.

phy; Katherine and John Gurash; Shirley and Hubie Laughharn; Colleen Williams and Jon Dudley; Tom Barron; Tom Barry and Jann Carl and David Sears.

■ Dr. Alan J. Fisher

Leana Sterios, Alyce Williamson, Mark MacDonald, and Marcia and Rich Caparella, of KKGQ, who hosted the concert preview.

■ The YMCA of Pasadena





# TRAVEL MA D E S

## Smart (Card!) Travel Management

by Danamichele O'Brien

Chief Travel Scientist & Director of Enterprise Alliances



In today's techno-world, one of the most intriguing gizmos is the "smart card." And as with many emerging technologies, definitions and standards are the challenge for both the industry and the end users. In terms of a definition, the "smarts" on a plastic card can be provided by several physical technologies, but what is more important to the travel management professional is that "smart" must refer to a card that has truly intelligent, useful and impactful functions. This, consequently, is where Rosenbluth International is focusing its SmartestCard™ activities.

The descriptor "smart card" can be used to describe a plastic card that has one or many of the following four physical technologies: 1) integrated circuits or "chips"; 2) magnetic stripes that go beyond the traditional debit/credit functions; 3) optical storage – this is similar to the laser disk technology; and 4) dataglyphs, which can be likened to super-duper, complex bar codes.

All of these technologies can be used to store data on a card, and most of them can facilitate some level of both read and write activity. The chips are the only technology that can "process" information remotely; but currently the operating systems on most chips are too inflexible to effectively accommodate multiple functions. This is why there is currently a great deal of excitement about smart card chip manufacturers standardizing with the "Java" language, as this would enable multi-functional chips. Multi-function cards, on the other hand, look to combine any of the technologies described above on one card, and so-called "combi-cards" combine both types of integrated circuit chips on one card.

Many industries and governments around the world are looking to some type of smart card for applications in the following areas:

- 1 **Telecommunications** – enables telephone calls or activates telephones
- 2 **Transit** – enables quick entry to mass transit or through toll booths
- 3 **Stored Value/Electronic Purse** – replaces "cash"
- 4 **Electronic Commerce** – enables secure purchasing on the Internet
- 5 **Loyalty** – enables membership/"points" programs
- 6 **Leisure and Entertainment** – enables various transactions within an arena or stadium

7 **Health Care** – enables decentralized storage of health care records/benefits

## 7 Health Care – enables decentralized storage of health care records/benefits

With all of these applications, their ubiquity is limited by the infrastructure necessary to accept and read smart cards, and the lack of a vested party willing to build the infrastructure. But despite these challenges, some smart cards have made impact and have become household words. Mondex is a chip-based function for stored-value/electronic purse, and so is Visa Cash. The significant difference between these two is their approach to audit trails. Mondex allows the exchange of value between individuals, without a centralized database, without government oversight. Visa Cash, on the other hand, has a centralized database and as such does not require any revisiting by regulatory bodies. Every individual has probably also heard of at least one of the many high profile European government and hospital initiatives which are utilizing optical cards for health care and identification.

And last, but certainly not least, most of the world's population outside of the United States has familiarity with the contact-chip "GSM" cards, like the AT&T CellCard™, which are used to activate GSM telephones. "GSM" stands for Global System for Mobile Communication, which is the de facto standard for digital wireless telecommunications in more than 60 countries outside of the United States. The AT&T CellCard functionality enables a traveler to "roam globally" in over 60 countries around the world; e.g. anyone can dial the traveler's "regular" United States cellular telephone number and the traveler's GSM wireless telephone will ring as he's sitting in France, or in Hong Kong, etc. In addition to the convenience of "global roaming," AT&T CellCard chips pre-program outbound dialing codes by country, which means the caller does not need to figure out what numbers to dial first. And finally, as was highlighted in a front page article in the Wall Street Journal on July 16, 1997, international wireless rates are often much more competitive than "regular" telephone rates – which is exciting news to many.

On July 14, 1997, Rosenbluth International announced their entree into the smart card arena (see related article on page 3). Rosenbluth International's philosophy, while working with clients to define applicable functions for their SmartestCard, is hinged on the belief that "smart" must refer to a card that has truly intelligent, useful and impactful functions for a large number of travelers. And that is why Rosenbluth International is so proud to bring to our clients, as an initial smart card functionality, our partnership with AT&T Wireless Services and the AT&T CellCard. Now that's "Smart (Card!) Travel Management!"



## Teaching Questionnaire

Instructor: PROF. BRENNENCourse: ME 101bYear/Term WINTER 97You are a: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior ☒ Graduate Student

You are being asked to provide your opinion regarding the effectiveness of your instructor in the attitudes or behaviors listed below. You may supplement this anonymous questionnaire with a formal signed letter to the Chairman of the Division of Engineering and Applied Science. Return this form in a sealed envelope to Marta Goodman, EAS Division Office, 104-44.

A= Excellent    B= Above Average    C= Average    D= Below Average    E= Far Below Average  
 NA= Not Applicable or No Opportunity to Observe

This instructor:

- |  |     |   |   |   |   |    |
|--|-----|---|---|---|---|----|
| 1. Has command of the subject.   | (A) | B | C | D | E | NA |
| 2. Was well prepared for class and gave presentations which were organized and clear.                                    | (A) | B | C | D | E | NA |
| 3. Was responsive to the class, e.g., welcomed questions and discussion as class size and other circumstances permitted. | (A) | B | C | D | E | NA |
| 4. Made course requirements and course grading criteria clear.   | (A) | B | C | D | E | NA |
| 5. Are the number of units of this course reasonable?  | (A) | B | C | D | E | NA |
| 6. Returned tests, papers and assignments in a reasonable time period.   | (A) | B | C | D | E | NA |
| 7. The probability I would recommend this instructor to another student is:  | (A) | B | C | D | E | NA |

Teaching Assistants:

- |   |     |   |   |   |   |    |
|---|-----|---|---|---|---|----|
| 8. Were accessible at reasonable times. | (A) | B | C | D | E | NA |
| 9. Were helpful.                        | (A) | B | C | D | E | NA |

For laboratory courses:

- |   |   |   |   |   |   |      |
|---|---|---|---|---|---|------|
| 10. Experiments were informative and challenging. | A | B | C | D | E | (NA) |
| 11. Lab materials were available.                 | A | B | C | D | E | (NA) |
| 12. Lab equipment was in good repair.             | A | B | C | D | E | (NA) |

Comments:

Well-run class. Prof. Brennen is very good at imparting his knowledge of the material.

Comments:

Prof. Brennen is one of the most enthusiastic, informative, + dynamic lecturers on this campus!

The T.A.'s went out of their way to help + make sure we understand the problems.

Comments:

Excellent course, excellent teacher. nothing else to say.

Comments:

DR BRENNEN IS A KNOWLEDGEABLE INSTRUCTOR,  
AND A LUCID SPEAKER WHO TEACHES VERY  
EFFECTIVELY.



# Sierra Madre's Christopher Brennen Appointed Caltech's New Vice President for Student Affairs

1997

Sierra Madre resident Christopher Brennen, professor of mechanical engineering at the California Institute of Technology, assumed the duties of vice president of student affairs on January 1, replacing Gary Lorden, professor of mathematics, who is stepping down after an eight-year term.

Brennen has much experience in student affairs, having served as dean students from 1988 to 1992, and as master of student houses from 1983 to 1987.

"Chris brings with him considerable talent and expertise," says Caltech President David Baltimore. "I look forward to working with him and drawing on his knowledges of Caltech and its students." Brennen came to Caltech in 1969 on a Fulbright Scholarship, and

joined the teaching faculty in 1976 as an associate professor. He was appointed professor in 1982, and executive officer for mechanical engineering in 1993.

In mechanical engineering, Brennen conducts research on complex multiphase and multicomponent flows that are a ubiquitous part of almost all existing energy systems. A particular emphasis is on the prediction of the dynamic characteristics of multiphase flows or their behavior at high concentrations. One project of Brennen's is directed at improved understanding of the dynamics and acoustics of cavitation.

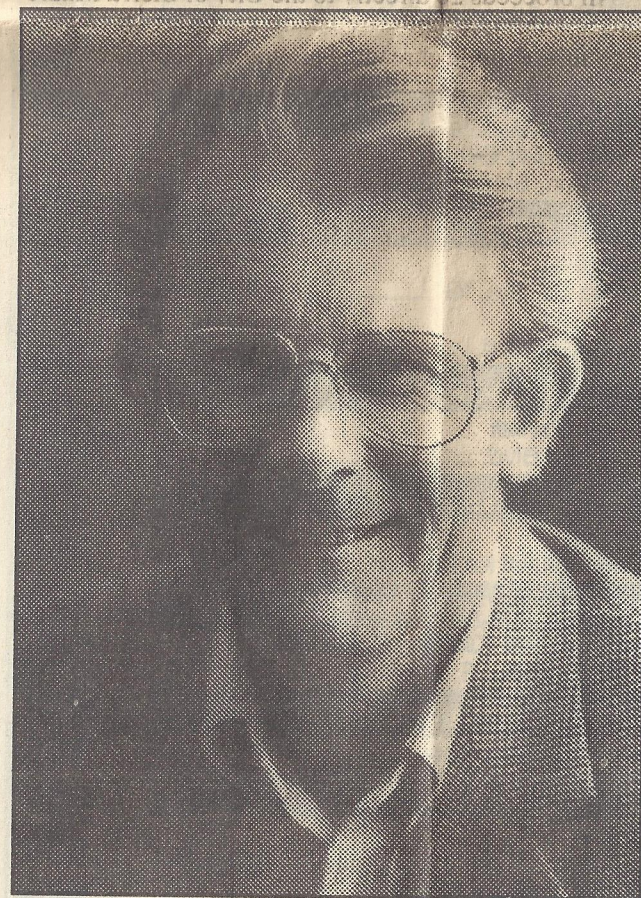
The author of more than 180 technical papers, Brennen has also authored seven books, one of which is being translated into

Japanese. An avid hiker, Brennen has written a book entitled *Adventure Hiking and Canyoneering in the San Gabriels*, which is currently under review by a publisher.

The environment for student affairs at universities has changed a great deal in the 10 years since he was master of student houses, Brennen says. "Both the general public and the government expect a university to take a greater parental role." Further changes include the makeup of the Caltech student body, which now has more female and minority students. "There is now a greater appreciation of the needs of particular groups," he says.

One thing, however, hasn't changed, says Brennen. "Caltech students are still the same marvelously bright, enthusiastic, caring, and responsible people they've always been. I look forward to getting to know them better."

Brenne was born in Bel-



*Christopher Brennen*

fast, Northern Ireland, and received his BA (1963), MA (1966), and his DPhil (1967) from the University of Oxford. He lives in Sierra Madre with his wife, Doreen.

## 1998 Girl Scout Cookie Sale Kicks Off

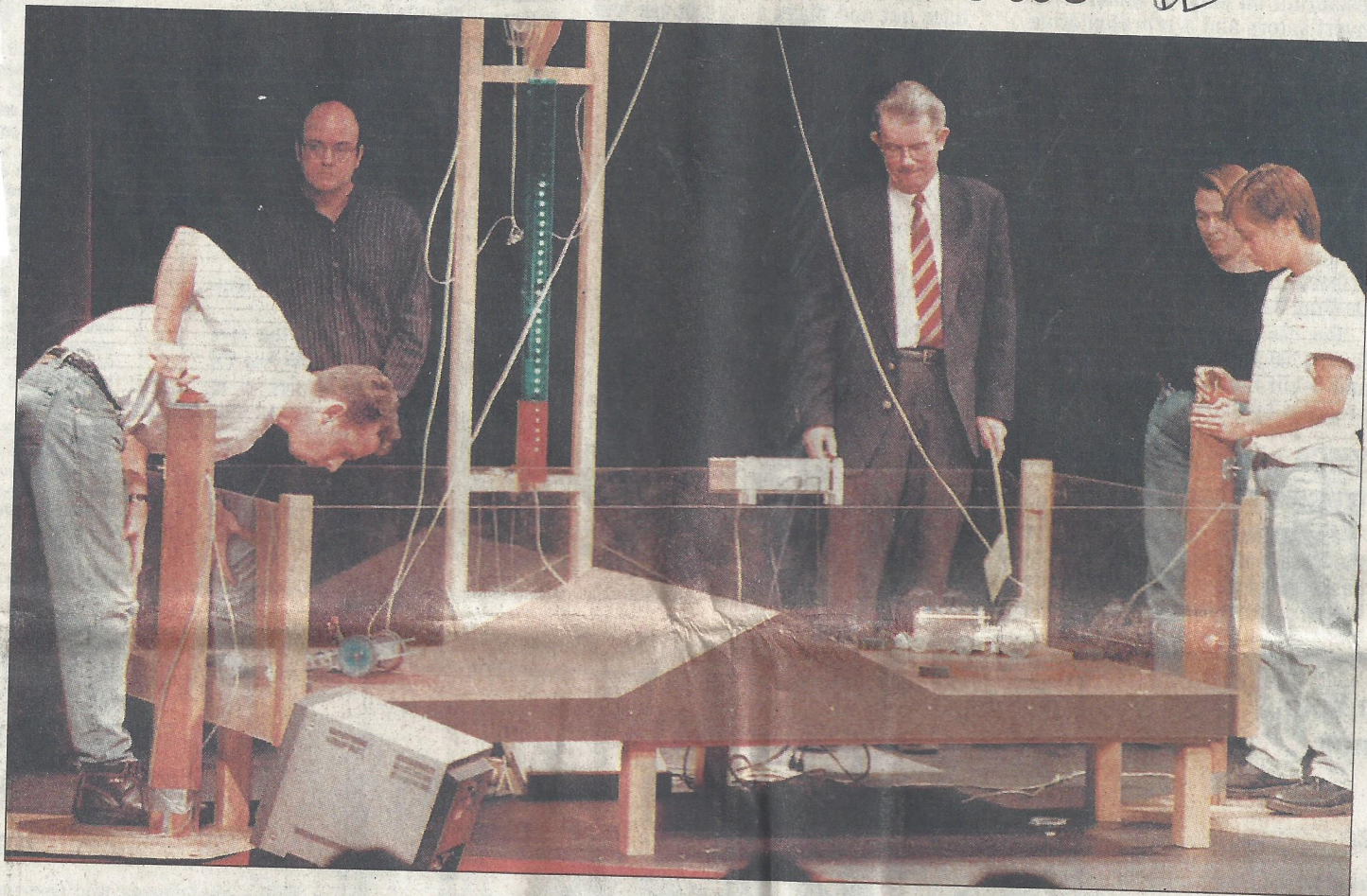
Girl Scout cookie time is here! Girls will take orders for Girl Scout cookies from Jan. 30 through Feb. 15 for

Pro



# Immortal combat

DEC. 1997



Staff photo by ANDY HOLZMAN

CALTECH students maneuver their mechanical creations during the ME72 Engineering Design Contest on Thursday.

## Machines battle it out in Caltech contest for engineering students

By Frank C. Girardot

STAFF WRITER

**P**ASADENA — Like something out of a low-budget sci-fi flick, a battle of machines Thursday afternoon took over Caltech's Beckman Auditorium.

It was the 13th Annual Caltech ME72 Engineering Design Contest, the highlight

of Professor Erik Antonsson's senior mechanical engineering class.

The object of the class was to build a machine — under 7 pounds — that could transport golf balls, hockey pucks and hose washers from one end of an 8-foot table to the other over an 8-inch high triangular ridge.

This year's winner? Benjamin Turk, a senior engi-

neering student who waltzed through the contest without a loss.

"It's probably the simplest device here," Turk said after his win. "I had it built before Thanksgiving."

Although Antonsson gave his students a grab bag of high-quality junk from which to build their contraptions, the end results varied wildly.

Turk's secret was a piece

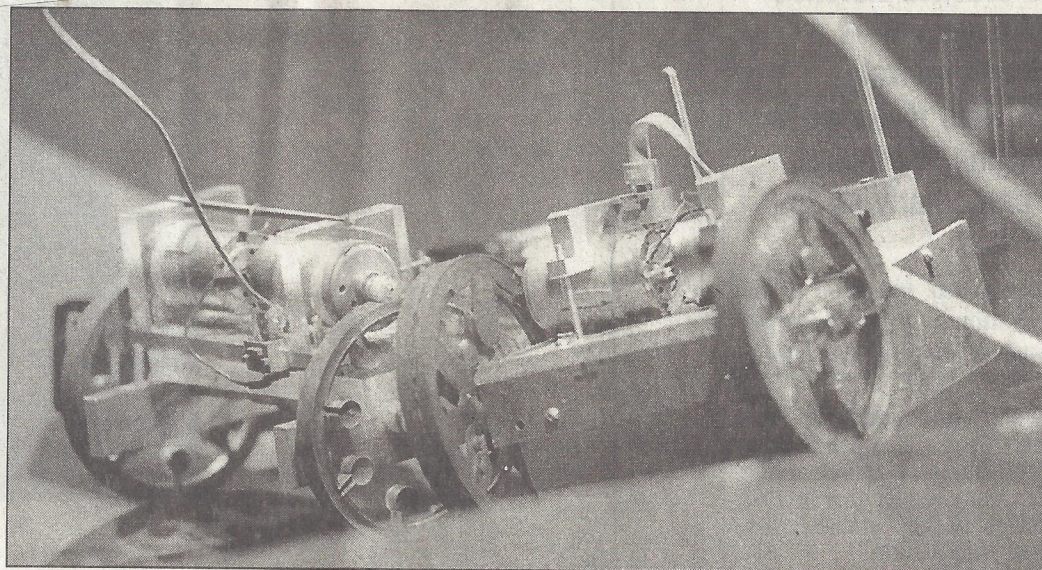
of Venetian blind he added to the bottom of his four-wheeled vehicle that captured the skinny washers and fat hockey pucks alike.

In years past, the contest has pitted electro-mechanical Sumo wrestlers and devices that collected golf balls from a trough.

"As a general rule, simpler devices like Ben's tend to do

Please turn to **CONTEST / A10**





Staff photos by ANDY HOLZMAN

**MACHINES** become entangled, above, during the 13th annual Caltech design contest. Below, Benjamin Turk holds high the winner's trophy.



## CONTEST

### Simplest machine grabs the prize

Continued from A1

well," Antonsson said. "I preach that to the students."

Other machines in Thursday's match ranged from the sporty to the large and unwieldy. All ran on electrical power, using joysticks to maneuver and switches to control various other electrical aspects of the devices.

While the 18 students in Antonsson's class went head-to-head in the tournament, which was double elimination, 1,000 or so fellow students packed into the auditorium cheered and howled.

"Go, go, go!" yelled some.

"He got lucky," yelled another after an upset win in the second of the eight rounds.

Chemical engineering student Allan Lee, a combatant who was eliminated early, said he'd been working on his entry throughout the school's 10-week term.

"Even though this is for mechanical engineers, this was a totally fun class for me," Lee said. "I got to learn some practical applications."





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December 8, 1997

Chris Brennen  
Vice President for Student Affairs  
Caltech  
Pasadena, CA 91125

Dear Chris,

Greetings from Atlanta! When I left Caltech, I asked my friend Bill Deverell to keep me abreast of the V.P. situation, and he sent me an email today with David Baltimore's announcement. As you can imagine, I am thrilled for Caltech. The students will have a real champion in you.

I am also delighted for you, my friend, because I know your decision means that you feel good about the job and that you have secured the strong support of the president. You will be a marvelous V.P. All my very best wishes for the days ahead, or, as you yourself might say, May The Road Rise Up To Meet You.

With Deepest Admiration,

A handwritten signature in cursive script, appearing to read "Doug", written over a horizontal line.

Douglas Flamming  
Associate Professor of History  
[doug.flamming@hts.gatech.edu](mailto:doug.flamming@hts.gatech.edu)





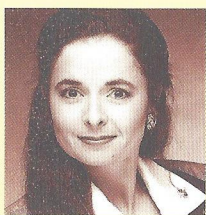
# TRAVEL MANAGER'S

## DESKTOP

### Smart (Card!) Travel Management

by Danamichele O'Brien

Chief Travel Scientist & Director of Enterprise Alliances



In today's techno-world, one of the most intriguing gizmos is the "smart card." And as with many emerging technologies, definitions and standards are the challenge for both the industry and the end users. In terms of a definition, the "smarts" on a plastic card can be provided by several physical technologies, but what is more

important to the travel management professional is that "smart" must refer to a card that has truly intelligent, useful and impactful functions. This, consequently, is where Rosenbluth International is focusing its SmartestCard™ activities.

The descriptor "smart card" can be used to describe a plastic card that has one or many of the following four physical technologies: 1) integrated circuits or "chips"; 2) magnetic stripes that go beyond the traditional debit/credit functions; 3) optical storage – this is similar to the laser disk technology; and 4) dataglyphs, which can be likened to super-duper, complex bar codes.

All of these technologies can be used to store data on a card, and most of them can facilitate some level of both read and write activity. The chips are the only technology that can "process" information remotely; but currently the operating systems on most chips are too inflexible to effectively accommodate multiple functions. This is why there is currently a great deal of excitement about smart card chip manufacturers standardizing with the "Java" language, as this would enable multi-functional chips. Multi-function cards, on the other hand, look to combine any of the technologies described above on one card, and so-called "combi-cards" combine both types of integrated circuit chips on one card.

Many industries and governments around the world are looking to some type of smart card for applications in the following areas:

- ① **Telecommunications** – enables telephone calls or activates telephones
- ② **Transit** – enables quick entry to mass transit or through toll booths
- ③ **Stored Value/Electronic Purse** – replaces "cash"

### BEST PRACTICE FILE



## Proving the Benefits of Going Global

Throughout the course of Rosenbluth International's four-year relationship with client Western Geophysical, the company has been very interested in new, different approaches in obtaining the best possible price on airfares – especially for their 70% international ticket base. A positive influencing factor that Western Geophysical already had in its favor is that because the company is involved in offshore oil exploration, travelers are entitled to utilize special "marine fares" that are greatly discounted 30-35% from normal fares. However, there was still some creative faring that Rosenbluth International could deploy.

From the account's inception, airline tickets for Western Geophysical's 12.7 million USD travel program were primarily issued at the Rosenbluth International on-site at the company's Houston, Texas, USA headquarters. However, Western Geophysical travelers began to notice that better airfares could be obtained at the company's many international offices. Rosenbluth International investigated, collected copies of tickets purchased overseas, and found that they, in fact, were much lower than those fares we could offer in the United States.

The first course of action was for Rosenbluth International to contact local suppliers in order to notify them of the price differential. As a result, some success was achieved with negotiated fares, however, what really revolutionized our partnership with Western Geophysical was opening our sister on-site office at their location in London, United Kingdom.

Because Western Geophysical travelers are very price conscious, they initially compared prices between Houston, London and third-party consolidation companies. Essentially, Rosenbluth International was "competing with ourselves," and the company would purchase where the best price was found. With this in mind,



- 4 **Electronic Commerce** – enables secure purchasing on the internet
- 5 **Loyalty** – enables membership/“points” programs
- 6 **Leisure and Entertainment** – enables various transactions within an arena or stadium
- 7 **Health Care** – enables decentralized storage of health care records/benefits

With all of these applications, their ubiquity is limited by the infrastructure necessary to accept and read smart cards, and the lack of a vested party willing to build the infrastructure. But despite these challenges, some smart cards have made impact and have become household words. Mondex is a chip-based function for stored-value/electronic purse, and so is Visa Cash. The significant difference between these two is their approach to audit trails. Mondex allows the exchange of value between individuals, without a centralized database, without government oversight. Visa Cash, on the other hand, has a centralized database and as such does not require any revisiting by regulatory bodies. Every individual has probably also heard of at least one of the many high profile European government and hospital initiatives which are utilizing optical cards for health care and identification.

And last, but certainly not least, most of the world's population outside of the United States has familiarity with the contact-chip “GSM” cards, like the AT&T CellCard™, which are used to activate GSM telephones. “GSM” stands for Global System for Mobile Communication, which is the de facto standard for digital wireless telecommunications in more than 60 countries outside of the United States. The AT&T CellCard functionality enables a traveler to “roam globally” in over 60 countries around the world; e.g. anyone can dial the traveler's “regular” United States cellular telephone number and the traveler's GSM wireless telephone will ring as he's sitting in France, or in Hong Kong, etc. In addition to the convenience of “global roaming,” AT&T CellCard chips pre-program outbound dialing codes by country, which means the caller does not need to figure out what numbers to dial first. And finally, as was highlighted in a front page article in the Wall Street Journal on July 16, 1997, international wireless rates are often much more competitive than “regular” telephone rates – which is exciting news to many.

On July 14, 1997, Rosenbluth International announced their entree into the smart card arena (see related article on page 3). Rosenbluth International's philosophy, while working with clients to define applicable functions for their SmartestCard, is hinged on the belief that “smart” must refer to a card that has truly intelligent, useful and impactful functions for a large number of travelers. And that is why Rosenbluth International is so proud to bring to our clients, as an initial smart card functionality, our partnership with AT&T Wireless Services and the AT&T CellCard. Now that's “Smart (Card!) Travel Management!”

a process was developed in conjunction with the London office that would enable associates at each site to become familiar with each office's contracted fares and advise our client to purchase the ticket where it would be most economical for them to do so. The process involves a system by which Rosenbluth International associates compare U.S. and U.K. airline contracts to published fares.

The method proved to be an immediate success. For the first quarter of 1997, Rosenbluth International saved Western Geophysical more than 109,000 USD. Though the work process is very time intensive, it is Western Geophysical's philosophy to have upfront savings, even if additional operational expenses are incurred. As a solution to increased operating expenses, next quarter, Rosenbluth International is introducing a value-added software product that electronically compares contracted airline prices, which will save a great deal of time.

Rosenbluth International's Western Geophysical on-sites have experienced firsthand the efficiencies of going global. Other benefits they have realized in their two-year transatlantic relationship include increased accessibility to airline plates for seldom used airlines, issuance of tickets when there are no U.S. airline representatives, extended hours for pre-paid tickets, special handling for local car and hotel reservations, the ability to expedite visa processing time by using consulates on two continents, getting a second passport for Americans in the U.K., assistance with telephone and fax completion when international lines are blocked, increased privileges that can be used by sales representatives on two continents (e.g. overbooking, special seat assignments, upgrades) and ticket exchanges.

Airfares vary in many markets due to local pricing controls, currency fluctuations and market conditions. Creative international faring and optimal point of origin purchasing can save companies thousands of US dollars. For more information, please contact your account manager.

## European Sales Hosts First U.K. Client Symposium

Rosenbluth International's first United Kingdom Travel Management Symposium was held on June 24, 1997, at the Inter-Continental Hotel in Hyde Park, London, with the goal of providing an open forum for travel managers to discuss issues concerning the travel management industry. The symposium centered around technology and deregulation – two all-encompassing issues affecting the travel industry in the United Kingdom – and featured speakers and question and answer sessions on both issues.

Attendees included clients from Visa International, Schroders Plc, Intel, MFS Communications Limited and various prospective clients, all from the United Kingdom. Plans are being made for a second symposium this Fall. For more information, please contact Lisa Doman at 44-171-437-0590.



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A20

★

Wednesday, October 15, 1997

## EDITORIALS

# O'Brien for controller

*An Independent outsider will help Philadelphia.*

A bright lawyer and CPA, Jonathan Saidel seemed well-suited to be Philadelphia's fiscal watchdog when he first ran for controller eight years ago. But his performance in office has been a mixed bag.

Alas, this egotistical insider — who may run for mayor in a couple years—makes a stunning misjudgment every once in a while. This year, his campaign gave a \$23,000 advance—and a \$13,000 loan—to his political adviser and friend Diana Roca (who returned the money under fire). The loan wasn't properly disclosed and, indeed, it wasn't even in writing. Mr. Saidel compounded the spectacle by chivalrously arguing that the criticism was largely fueled by bias.

Is there a candidate in the field who would do the audits as well? Who could fulfill the controller's other duties, such as serving on the board of the Philadelphia Housing Authority, but without spectacles

such as the Roca mess or Mr. Saidel's undistinguished chairmanship of PHA during his first term? Yes.

**WILLIAM O'BRIEN**, is an attorney with the intelligence and training to do the job well.... Mr. O'Brien persuasively argues that he'd take the controller's office in a more useful direction— by concentrating performance audits on the core areas of city government, such as revenue and law enforcement, in contrast to the less important (and often safer) areas analyzed by Mr. Saidel.

And with the mayor's office held by a Democrat for at least the next two years, Mr. O'Brien's independence of the party in power weighs in his favor. It's better for this watchdog role to be fulfilled by a member of the opposition.

Taxpayers deserve a steady, independent watchdog over Philadelphia's budget, programs and services. William O'Brien is the best man for the job.

# FLYING W



## JOB TITLES OF THE FUTURE

**DANAMICHELE BRENNEN O'BRIEN**

**CHIEF TRAVEL SCIENTIST**

**Who:** Danamichele Brennen O'Brien

**Company:** Rosenbluth International

**Age:** Thirty-four

**Has Held Title For:** One year

**Previous Title:** Director, global marketing and product development

**Degree:** BS, University of California, San Diego; MS, Carnegie Mellon University; MS, Wharton School

### BUSINESS MAY BE AN ART, BUT DANAMICHELE

Brennen O'Brien is turning business travel into a science. As the head of a research team at Rosenbluth International (annual sales: \$3.5 billion), O'Brien is developing services designed to turn reservations agents into travel consultants. The goal: not just cheaper travel, but better travel.

### What's wrong with business travel?

"There's nothing fun about business travel. It's tiring; it takes you away from family. The key is to understand when travel really is productive — and when you can avoid it."

### What's your idea for fixing it?

"We want people to think in terms of 'travel management' rather than 'travel expenses.' Don't just analyze how much a trip costs; analyze how successful it was."

### How do you test your ideas?

"I spend a lot of time with clients. They help me test whether what's coming out of our lab is worthwhile."

### Are you a science nerd?

"My father is a professor of engineering at Caltech, so maybe it's a family thing." — *Shannon Spring*

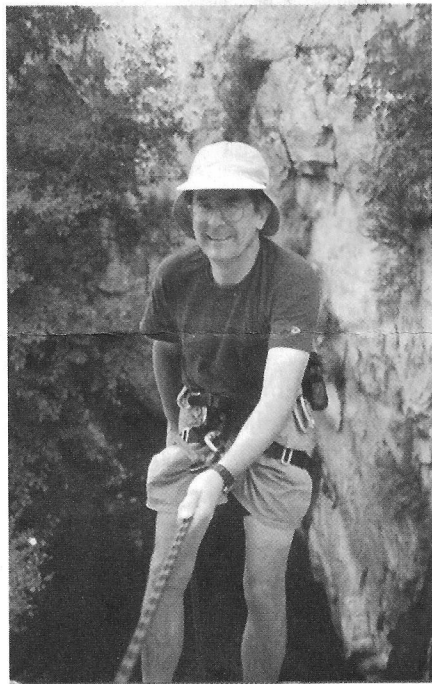
TOP LEFT: JIM GRAHAM; RIGHT: ADAM MCCAULEY



## CHRIS BRENNEN NAMED INSTITUTE'S NEW VICE PRESIDENT FOR STUDENT AFFAIRS

Professor of Mechanical Engineering Chris Brennen has been named the Institute's vice president for student affairs, succeeding Gary Lorden, professor of mathematics, who stepped down after an eight-year term. Brennen has much experience in student affairs, having served as dean of students from 1988 to 1992, and as master of student houses from 1983 to 1987.

"I am looking forward to the chal-



An enthusiastic hiker and climber, Chris Brennen, shown here preparing to rappel down a thousand-foot cliff, is taking on yet another challenge as Caltech's new VP for student affairs.

lenge of the vice presidency," says Brennen. "Right now, there is a great deal to learn before I decide on specific goals," he adds. "Because of the remodeling of the Bookstore, some areas in Student Affairs are in a state of flux right now. We need a coherent plan for the department, which I hope to work on soon, including addressing issues such as facilities. Student Affairs departments are in a multitude of offices right now. We need to find a way to co-locate them in ways that are more efficient and user-friendly to students."

In studying for his new job, Brennen recognizes the accomplishments of his predecessor. "Gary did a marvelous job as vice president," says Brennen. "Great new facilities have been added to Caltech, such as Avery House and the Braun Athletic Center. Incidentally, I am a strong supporter of the concept behind Avery House."

Brennen received his D.Phil. from

the University of Oxford in 1966. He came to Caltech in 1969 on a Fulbright Scholarship, and joined the teaching faculty in 1976 as an associate professor. He was appointed professor in 1982, and executive officer for mechanical engineering in 1993.

The author of more than 180 technical papers, Brennen has also authored seven books, one of which is being translated into Japanese. An avid hiker, Brennen has written a book entitled *Adventure Hiking and Canyoneering in the San Gabriels*, which is currently under review by a publisher.

In mechanical engineering, Brennen conducts research on complex multiphase and multicomponent flows that are a ubiquitous part of almost all existing energy systems. A particular emphasis is on the prediction of the dynamic characteristics of multiphase flows or their behavior at high concentrations. One project of Brennen's is directed at improved understanding of the dynamics and acoustics of cavitation.

The environment for student affairs at universities has changed a great deal in the 10 years since he was MOSH, Brennen says. "Both the general public and the government expect a university to take a greater parental role." Further changes include the makeup of the Caltech student body, which now has more female and minority students. "There is now a greater appreciation of the needs of particular groups," he says.

One thing, however, hasn't changed, says Brennen. "Caltech students are still the same marvelously bright, enthusiastic, caring, and responsible people they've always been. I look forward to getting to know them better."