Fossil find by Monash team

350 million years of history uncovered in . . .

SCORES of fossil fish, 350 million years old and holding secrets to early life, are being analysed by the University's Zoology Department.

The fossils, found buried in billy country about 100 miles north-east of Monash, are of world-wide interest and significance.

It is extremely rare to find ancient fossil fish in such quantity and variety of type and so well preserved.

Professor J. W. Warren, who is supervising the excavation of the bones and the laboratory research, will detail the find to world experts at the ANZAAS conference in Brisbane, May 24-28.

"Hopefully the fish will give us clues about the evolution of the continents and time changes in the evolution of primitive animals," Prof. Warren told the Reporter.

"One very puzzling thing is that so far - and we have recovered scores of fish specimens - we have not found any invertebrates such as primitive crustaceans, clams or snails that might have served as food for the fish populations. We don't know what they lived on."

Prof. Warren said the first trace of the bones was made by a Senior Lecturer in Geology at Melbourne University, Mr. Marsden, who was making a geological map of the area. Mr. Marsden brought his find to Prof. Warren who began an investigation of the area.

During the recent vacation the Monash Zoology Department and the Department of Geology at Melbourne University arranged for a bulldozer to be at the site and carry away the top layers of a hill to reveal the remains.

The fish date from the Upper Devonian period - fish have been known earlier than this but, with two exceptions, those found in Australia have not been well preserved nor is there such a diversity of types found in one place.

Zoology is not saying where the field is. "It's disappointing, but I'm afraid true, that rock collectors would get to this place and souvenirs specimens for the mantelpiece or for sale overseas," Prof. Warren said.

"We've had a fossil site ruined in the past by claim jumpers and we intend to keep the locality of this one a secret."

Prof. Warren said there were six main varieties of primitive vertebrates in the remains -

- Acantthodians or "spiny sharks."
- Arthrodires. These are armored fish with the head and front part of the body covered in bone. Several kinds have been discovered at this locality, all of which are now extinct.
- Paleoniscids. These have slightly more advanced jaw structures than the acanthodians and are considered ancestral to modern day fish.
- Crossopterygians. These are lobe-finned fishes that gave rise to the earliest terrestrial animals. So far only large scales of these fish have been found at this locality.

FOOTNOTE: A few days after the TV program, The Herald evened the score with the students when, in a review of the book, it spoke of Victoria's only two remaining memorials to Sir John Monash - the statue outside the Shrine and the State Electricity Commission.

JOHN MONASH

ABOVE: Staff from Monash and Melbourne Universities dig for the remains of the ancient fish. Already 60 crates of rocks have been brought back. Below: Ian Binnsler, 20, visiting the Zoology Department from Northern Arizona University, displays a section of rock containing lung fish.
The State of the Nation

Ever since the closing of Berkeley in 1964, student unrest has been a major part of the modern university scene in the U.S. A tragic, frightening culmination occurred in May and June last year with the slaying of students at Kent State and Jackson State.

The following months have been like the aftermath of a nuclear explosion—dead, still, eerie. Is it time for talk, compromises, answers? Or is the fuse still lit, burning towards another explosion?

Dr. J. C. Clevenger knows a lot about US universities. He has been associated with the administration of US higher education for almost 30 years and is now Vice-President in charge of Student Affairs at Washington State University.

Dr. Clevenger, who is at Monash for four months as part of his sabatical leave, gave the following interview on US student problems to journalist Mietta O'Donnell for the Reporter.

Dr. Clevenger, a round-faced, genial man, started talking generally: "The recent turmoil and torment of educational progress is unprecedented in the history of our nation. "As the crisis on the campus grew he reflected on the divisions and the polarisations that have eaten like a cancer into our American education occurred around which baa thankfully given us some students from the bard core group strikes, "be aided.

"The invasion of Cambodia by US troops and the student deaths at Kent State and Jackson State, May and June last year with the slaying of students at Kent State and Jackson State. "I believe there is a built-in resentment and a crusader - irrespective of the way they may handle themselves, there is a sense of invasion," Dr. Clevenger said. "As an administrator and counsellor I hope very much to get the kind of responsibility among the faculty and students which will permit us to handle our campuses without violence."

"At the University of Illinois, a judge of national repute was hired for discipline hearings using full court procedure spread over 500 pages of testimony. This is a pretty involved and expensive process. "I would expect to have more of this as our proceedings on US campuses become more and more legalised. I can remember when a student broke the rules, the dean called him in and said - 'pack your bag son'—now the student is advised in writing of his transgression of the rules and is given an opportunity to respond in writing and then the whole case is put before a committee with careful attention given to due process. "A counselling situation is far more preferable to such court procedures. The attitude could be - so he's made a mistake but maybe he can learn from it and be a more valuable part of the education community."

"The more you move to court-like procedures, the more you move to polarisation," Dr. Clevenger said. "Polarisation within the campus and between the campus community and the non-campus community is inevitable and unfortunately doesn't really understand all the things that are happening."

"After last spring there were a number of meetings across my state and people were gathered to discuss the problem of the campus and they would invariably talk about it being 'our university.' In the end the public universities DO belong to the people who created them and who do support them and there should be a situation of harmony, not of polarisation between the two."

Protest a part of life

To conclude Dr. Clevenger said the current campus unrest could not be taken for granted. "The mood of protest is a part of the life of the '60s and will go on," he said. "I believe there is a built-in resentment and a crusader - irrespective of the way they may handle themselves, there is a sense of invasion," Dr. Clevenger said.

"The conditions that produced the unrest are still with us—we are still at war in South East Asia, we still have the anguish and the unresolved problems of racial inequality and injustice, and educational reform is proceeding slowly. "But if students feel, and I believe they do, that effort is being made to bring resolution to these problems and that they are a part of it and are being listened to with care - then the unrest will stop."

"If hypocrisy, double dealing or unfairness is experienced then the students feel that we are on our own and there will be more trouble."

"There is a feeling of frustration in the young people of today because they just don't think that the world is moving fast enough to resolve their problems. "Their principal concern is man's inhumanity to man - and when you look at the troubles of racial conflict, you realise that we have a common problem and real concern for our fellow man then most of these problems will disappear."

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Color TV on campus

The university last week officially took delivery of a complete educational color television unit worth $750,000.

The unit was a gift from Smith, Kline and French Laboratories (Australia) Ltd., pharmaceutical manufacturers. It includes color cameras, monitors, projectors, a portable studio, lighting equipment and a mobile control unit.

Picture above shows, from left, Peter Boyle (maintenance technician), Richard Crompton (camera control operator) and Don Black (senior maintenance technician) checking over the production control area of the van in readiness for the handing-over ceremony on Friday. (Photo: V. Kohout.)

'Revolution' is upon us

-says Robin Boyd

The biggest sub-revolution yet in the modern movement of architecture has begun, according to architect—author—critic Robin Boyd.

It is already affecting advanced architectural thought so radically that it could produce an entirely new approach later in the '70s.

Mr. Boyd made his prediction last Wednesday in the inaugural lecture of a series of six arranged by the Faculty of Arts. Other speakers in the series will be Dr. J. A. L. Matheson, Dr. E. Grenie Robertson, Prof. W. F. Ledgard, Mr. Harry Seidler and Mr David Young.

The new revolution was married to much of the youthful social dissent of the day, Mr. Boyd said. Its followers thought in terms of traffic control, pollution, slums, rents, conservation, housing boredom, afforestation, noise control, civic politics and a dozen other social problems.

The movement had already pushed forward at least one genuine hero—American professor Robert Venturi, who had been the first to translate the Pop Art movement into architecture.

Venturi, however, did not use the word "pop"—he preferred "inclusiveness," meaning the opposite of esoteric exclusiveness, the refined taste of architects who had preceded him.

"His work displays a breathtaking banalinity," Mr. Boyd said. "The art and intellectuality in it is his staggeringly original idea of using ordinariness as an art form."

Some of Venturi's statements were deliberately calculated to rock the foundations of modern architecture. Should the outside of a building reflect what goes on inside, as modern architectural dogma insisted from the start?

Venturi's reply to this was: "It's much cheaper to do something straightforward in the first place and then add something, than to distort the whole building to get 'expression', Art, in this sense, is unnecessary elegance."

Mr. Boyd said that underneath every responsible human's apparent insensitivity to his shelter there was a desire for some sense of reality in the background of life.
TEACHER militancy, including strike action, has become world-wide in the past 20 years and appears to be part of the larger phenomenon of white-collar unrest.

In the US, for instance, there have been 500 stoppages by teachers in the 1960s including 425 since 1967-68. These represent 5.23 million man days lost.

Australian teacher unions have used direct-action only since 1965 (except for a three-week strike in Western Australia in 1920), and it has been confined largely to Victoria.

In this time about 30,000 working days have been lost - that's not too much compared with the previous US figure.

The VSTA stoppages have been in Queensland (1 in 1968); NSW (3 in 1968-70); VSTA (9 in 1965-70) and the Technical Teachers' Association of Victoria (4 in 1967-70). All of these stoppages have been for one-half day or one day duration.

The VSTA and the TTAV have also held official stoppages at individual schools since 1969, with the VSTA having more than 40 stoppages over "control of entry", including prolonged stoppages at Northcote, Homestead and other high schools.

The overall, the record of teachers' strikes in Australia, compared with other countries, is moderate and short.

It appears that throughout Australia, with the exception of the VSTA and TTAV, teachers are generally unwilling to employ strike tactics, even as a last resort in conflict situations.

This is borne out not only from statistics alone but from instances of union ballots conducted to determine rank and file attitudes to strike action.

In the Victorian Teachers' Union a 1965 poll of 11,166 members revealed that only 31 per cent were prepared to engage in conventional stoppage and render their occupations heterogeneity. This has not yet been examined in any detail.

The relative security of their occupation's heterogeneity. This may be centred on professional issues and may also influence the attitudes towards strike of Australian teachers.

High sensitivity

Furthermore, the fact that they provide a public service inhibits the willingness to strike. Only the VSTA has developed a strike ideology which emphasises that industrial action is for the betterment of both pupils and teachers.

The English National Union of Teachers' ballot in 1970 in which over 80 per cent favored strike action, needs separate comment.

This reluctance of teachers to embark on strike-action is a product of several related factors, the most obvious being the relative non-existence of a strike ideology.

They have always been confronted with a conflict of interests between their loyalty to their professional association and their responsibility to their pupils. Many teachers feel that their pupils should not be made to "sacrifice" in the sandwich" in their disputes.

The rumblings of discontent in State schools are rarely out of the news.

A prime cause is the Victorian Secondary Teachers' Association. Two years ago, this Association introduced its controversial "control of entry" scheme - the teacher qualifications classification that still causes stoppages in schools.

More recently, the VSTA called the prolonged strike at Melbourne High School over the Teachers' Tribunal. The Technical Teachers' Association has been slightly more subdued, but still willing to go on strike. Thousands of teachers from both divisions went out for one day last week.

Andrew Swail, senior teaching fellow in the Education Faculty, is studying Australian teacher unions since World War Two. In the following report, he talks about some of the issues raised in these strikes, and compares Victoria's experience with other stoppages in Australia and the US.

Perspective on teacher strikes

By COLIN O'HARE

Lecturer In Law

They conglal in the relative security of conventional systems and suppress their subordinates accordingly.

Untrained executives, understandably, defend their elevated positions very jealously. They allow younger prospects little opportunity to display their talents and utilise their expertise. The bureaucratic system of promotion by seniority is still widespread.

There is a tremendous waste in industry, in the form of unproductive manpower. For reasons of status, clerical jobs, which could be capably performed by non-graduates, are allocated to graduates. Superiors tend to overlook that a man developing at a high level of thought process will become very quickly disassociated with a task which is menial to his training.

Executive who are unable or unwilling to implement the graduate's capabilities in a short-term analysis than to indoctrinate him for the executive office he will eventually hold. Again his superiors neglect to recognize his discontent with his non-productive and uninteresting activities during the long interim.

I could go on. But the more important issues are what this means to the graduate and to industry.

If the graduate is so motivated to accept repressive conditions, he is assured the security of a good salary, regular increments and enviable fringe benefits. In return, he is obliged to subordinate himself to the established convictions of his superiors as he automatically progresses up the ladder of promotion. His only real concern, apart from his dignity, is for the more enterprising graduates who will be pressing for his position.

If the graduate, on the other hand, is proficient and conscientious, his lot will be one of discouragement and disillusionment until such time as he seeks employment elsewhere, perhaps sacrificing financial reward, to derive some intellectual satisfaction.

The irony is of all the is that the employee loses an indispensable employee for failure to implement an organization for their mutual benefit. The domination of the competent graduate is remarkably successful in achieving what seems to be the primary objective of Australian commercial institutions - the perpetuation of mediocrity.

April 5, 1971

with 20 per cent females in their membership.

Within the teachers' union, there is one significant constraint on strike activity - the strike-ballot clause. The ballot allows the membership a direct vote on the strike question; it also allows the teachers to hide their fears of reduced income, victimization, and their political conservatism, behind the anonymity of the secret ballot.

In Australia there is not one example of a strike-ballot in teachers' unions which has resulted in favor of a strike-action. Significantly, the VSTA does not have to hold a strike-ballot to call a stoppage, while the TTAV and the NSW Teachers' Federation can call one-day stoppages without a membership plebiscite. Such a process.

There is one final factor which tends to constrain teachers' unions that are registered to a state industrial commission. These unions in NSW, Queensland and Western Australia do not have a right of strike action because of the risk of court penalties. In Victoria the three teachers' organisations are not registered as trade unions.

The above factors appear to be the most important constraints on strike activity in Australia. But it should be stressed that such restrictions towards industrial and political action appear at the moment to be in a transitional stage.

If this is the case and provided education systems fail to respond to demands for major improvements, then teachers' strikes in Australia may become more widespread and less moderate.

If an alternative teacher strike proves successful in terms of meaningful gains in education, resistance to the strike ideology would collapse.

Teachers, especially those from non-teaching backgrounds, would find the strike a new social experience and its psychological effect (an experience similar to that of strike participation in other countries) would only exacerbate what may be the use of the strike-weapon in future conflicts.
Early last year, one of the three Harvard scientists who had isolated a single cell from the bacteria causing tuberculosis was abandoned research to become a full-time political activist. His name is Dr. James A. Shapiro, then research fellow in Bacteriology and Immunology, and I think his ideas bear considerable interest to those contemplating technological careers.

The following quotations from a Boston newspaper at the time, and from "Science," volume 167, number 3937, convey Shapiro's feelings and motivations. Whatever I could do in the lab is useless at this time. The only constructive thing that people do is something that challenges the present political system.

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"Political solutions more urgent than scientific" - Clive Bonn

While it is not surprising that these anti-activist views would provoke some reaction, the hostility of the reaction in the "Letters" columns of subsequent editions of "Science," reveals the entrenched bigotry of the academics concerned.

Professor R. G. Barden said he would be a thinker, the answer to every question which he then finds was answered previously. The professor of Philosophy and a Department of Australian Universities, said that the "scientifically "active" field is a tendency to worship the scientific method.

A letter by Fresco et al stated that "...the shibboleth of scientific "anti-intellectual" (and criticized for not wearing a tie at lectures), it is a challenge to "intellectual" and was preaching "dangerous attitudes" that had plagued man for centuries. Shapiro was accused of being "anti-scientific," (as Becker and Shapiro did) that the only way to prevent misuse of our scientific discoveries is by introducing morality and social responsibility into our governments. Furthermore, it is not only altruistic but imperative for a scholar to be politically active. Finally there is a common tendency (as in the Fresco letter) to consider the community of scientists as a leading social elite. It seems obvious that scientists should share experiences and responsibilities from a position of equality with all other sectors of the society. If efforts to bring peace and justice in a more livable world are to be successful.

"Noise research needed" - Professor R. G. Barden

MUCH more could be done by modern technology to counter the problem of noise-induced hearing loss, the Chairman of the Acoustical Society, Dr. Reginald G. Barden, a recent seminar on noise.

Professor Barden, who was speaking at a seminar at Warwick University organized by the Acoustical Society, said that "...to make the best possible use of your technological skills..."

Professor Barden said that in some industrial environments the worker was at risk because of likely hearing impairments. Research methods are expected to locate the industry at a risk because of the heavy cost of remedial measures and if attention is not given to these then there is the risk of the political consideration..." he said.

"A compromise has to be found. This obviously depends on enlightened management. It is best in the circumstances, and the workers themselves in any case, to establish protective systems for their benefit..."

Professor Barden said he believed a controlled research experiment was necessary; this would involve a large group of people preferably exposed only to occupational noise and another control group assumed to be noise-exposed. "We used to study these groups for a long time - a time expressed not in days but years..."

Professor Barden told the seminar that migrant language problems were made worse because they are not exposed to the "active" field, which is a tendency to worship the scientific method.

"What Monash people have been saying..." - Clive Bonn

"Political solutions more urgent than scientific" - Clive Bonn

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A short dissertation on the weaknesses of women

Spanish-born author, Lucius Junius Moderatus Columella, doesn't like the fair sex. He says that women "abandon themselves with luxury and idleness."

Columella believes that women have a "distaste for home-made garments and a perversity desire to purchase clothing for large sums and almost the whole of their husbands' income."

He maintains that "the female sex has been provided for the care of the home, the male for the out-of-doors and open-air activities."

The words were written in the 1st century—or about 1900 BWE (Before Women's Lib.).

Columella was a farmer in the Roman province of Cadiz in southern Spain. He was an agricultural writer and the quotes come from a chapter headed "The Bailiff's Wife and Her Responsibilities" in his 13 book treatise on agriculture.

The original is in Latin and the "bailiff" was the equivalent of a farm manager. The mammoth 700-page work has been indexed over the last four years by the Classical Studies Department at Monash for publication in the 1970s.

The Monash work, which is due to be published in April, is based on the findings of a Columella by two Swedish scholars, Lundstrom and Hedberg.

The project's chief investigator was Graham Turner, who sorted through the materials, and an avid collector of ancient books. His assistants were Mrs. Pat Watson, formerly a teaching fellow in the department, and Mrs. J. Rivers, of Language Services.

Mrs. Waterson's job was to painstakingly go right through the books, coding all the words to a pre-determined code of tenses, verbs, adjectives, prepositions, nouns, etc.

Mrs. Rivers put this work on to tape to explain it . . . "Voluntary" has been coded 5a (auxiliary verb) and "etiam" 6b (verb word or expression modified).

A program was made for the computer which sorted through the alpha-epsilon order and recorded how many times it occurred and where it occurred.

The finished index will be something like this - pastoris (gen.),

7.3.14, 7.5.21. This gives the word, its grammatical case (gen.) and the places where it occurs - book 7, chapter 3, section 14 and chapter 5, section 21.

What use is all this work? According to Mr. Betts: "Marked grammatical changes were taking place in Latin around this time and grammarians will be able to detect these changes in the index. Scholars can determine how often the words were used.

"Columella had a definite style of his own and he is a valuable author for detailed study. And of course those interested in the history of agriculture can use the index to pick up what Columella has to say about farming in the Early Christian world."

Wine, greediness, superstition, sleepiness - and the society of men

Beauty induces sloth

A bit more 1st century philosophy from Columella - it's fascinating reading. Still on the subject of women, he tells the young man what he must look for in a wife:

"If she ought to be young and have sound health and neither have an ugly appearance or on the other hand be very beautiful, for unimpaired strength will suffice for long vigils and other toils, and ugliness will disgust her mate while excessive beauty will make him slothful.

"So care must be taken that our half-wit is not of a wandering nature and does not avoid his wife's company, and that, on the other hand, he does not want his time indoors and never far from her embraces.

"It is also of the first importance to observe whether she is far from being addicted to wine, greediness, superstition, sleepiness, and the society of men, and whether she readily grasps what she ought to remember and what she ought to provide for the future.

"Also she will have to be absolutely convinced that she must remain entirely, or at any rate for the most part at home; and that she must send out of doors those slaves who have some work to do in the fields, and keep within the walls those for whom it seems that is some duty to perform in the villa."

And finally to remedy sickness in animals, Columella suggests a mixture of red wine and garlic. That seems a sure way to have a drunken cow with very bad breath.

Columella says: "Laxitude and nausea also can be dispelled if you force a whole raw hen's egg down the animal's throat when it has eaten nothing."

Code: 75.21

A student in court

Dear Sir,

Our colleague from Humanities, Mr. D. D., undoubtedly made some justifiable points in his analysis of this University (Reporter No. 1), but there are two points over which I must disagree.

He seems to have a fascination with the college system - the separation of the university into groups of 30 or so academics and their duties.

If this type of system is ideal for a university perhaps Mr. D. D. would like to give his students an example of an attempt to set up a College system at La Trobe University has failed.

Secondly Mr. D. D. is being under a great misconception if he believes that "Monash clashes at 5 p.m., and lasts 25 weeks a year."

To continue his quote: "Students and staff do their work and get out as soon as possible. The real world is elsewhere - and the only positive stimulation comes from activism extracurricular, putting up with the loyal support of the University unions."

That might be true of his work - I don't know. But it is not true of those university departments where scientific, engineering and medical research is done.

There the 25-week university year is a big joke. Research, seminars, formal and informal discussion goes on the year round - and staff and students alike complain only that there is not enough time.

-P. L. GLETT

(Allia Gordon Troep, Physica)

Pampered pavements

Dear Sir,

For several years the pavements of this University have been watered copiously. Thanks are due to the gardeners' judicious placement of sources of teeming sprinklers adjacent to our paths.

We are pleased to report that the paving stones have flourished and multiplied so much as to threaten less tender loving care from the gardeners. Melbourne's ever present rubbish and the delightful maintenance service we have been enjoying are surely enough to ensure paving growth at a rate sufficient to meet the needs of University expansion.

Before we are up to our necks in paving stones we suggest instead the water be directed to the lawns to help them combat the forthcoming insidious invasion of pavements.

Robert J. Jegg, I. J. Abbott, (Zoology)

(Mr. Troep, along with others A. A. Miller, currently identified, E. Orr as some other than Politic. own Max Teichmann.)

Robert J. Jegg, I. J. Abbott, (Zoology)

Letters to the editor

against Australia's support for American policy in Vietnam, which has expanded the war into Cambodia and Laos under the guise of Vietnamisation in reckless pursuit of the goal of military victory.

We believe that many more young men have refused to register than have faced prosecution, while those who have taken a stand against the Indo-China War have been singled out. We, as members of the Staff-Student Group of Monash University, and as individuals, have campaigned against Australian involvement in this political war on many levels.

In particular we support the opposition of Mark Taft to this war. Moreover we deplore the obvious political victimisation of one of our students.

-Brian Brogan (Economics), Dennis Douglas (English), Ian Turner (History), Margaret Corris (History).

Challenge

Sir,

On Tuesday, March 2, during an Orientation Week address, Dr. R. Birrell of the Sociology Department stated that he "sympathised" with those students who last year rebelled the Careers and Appointments Office as a symbol of "capitalism on campus", which Dr. Birrell agreed was an "inconvenient reality to Monash."

I would like to ask Dr. Birrell to clarify and expand his position on this matter in your column, particularly in regard to the following question:

Is Dr. Birrell in favor of the principles of university autonomy from outside interference in any society?

What does he think of the following statement by members of the Monash Labor Club:

"If the university did survive after a Socialist Revolution, it would differ from existing universities in so far as instead of producing technicians for capitalism it would supply workers and cadres for socialism."

[Left Action Conference, April 1970]

From this statement, it is clear that the occupation of the C. G. & A. Office was carried out by people who don't believe in the university's freedom from society. Their only objection is here that it happens to be (in their view) a capitalist, not a socialist, society.

One has to make a choice. Either you believe in unqualified university autonomy and condemn the students, or you agree that some societies can interfere and so "sympathise" with the students.

What is Dr. Birrell's position?

-Peter Morgan

(Department of English)
One of the pressing tasks to facilitate integration of highly qualified migrants is the establishment of effective intensive English programs. The talents of the tertiary trained migrant are, I believe, urgently needed by the Australian community. Australia has had a long and laudable record in developing language teaching programs, materials, and methods for migrants. A university can make a substantial contribution to the community in this field - it has the expertise and facilities and it has the long vacation when they can be used. Monash decided in 1969 that it would offer to establish a course in English for the professional migrant. Language Services, which was created in 1969 as part of the Arts Faculty, began the first course in January last year. In implementing the course the problems facing Language Services were manifold. Recruitment of well-trained and experienced teachers was probably the greatest, because of the sad lack of teacher training programs available in Australia for prospective teachers of English as a foreign language. The deplorably low salaries of part-time teachers in this field certainly does not act as a facilitating factor to attract candidates and to establish training programs. In recent years research in theoretical and applied linguistics, in psycho- and socio-linguistics, as well as in modern culture, has radically altered language teaching. Most recently new insights gained by research in communication and educational technology have provided a host of data waiting for analysis and application in the field of teaching.

Halfway solution sod

Ironically enough, very little has been done in the universities of Australia, in a country where the need for development is even greater than in most of the other countries. It would be said if halfway solutions were sought that research in the field of unprofessionally conceived programs in teaching and research, and if outdated organizational frameworks were to impede or delay the realization of new measures. A great deal of leadership and research has evolved from Monash faculty members in the field of language teaching and linguistics in the past. The question is - will the university be enabled to use a farsighted and openminded policy to build on this excellent start or will it overlook the chance which other Australian universities perhaps did not have in the past.

In order to act effectively, it will be necessary to do some serious soul searching and establish priorities in the field of teaching and research in foreign languages with special consideration to English as a second language.

The national significance of university involvement is obvious for two reasons -

• Australia is recognized as the most important migrant-receiving nation by UNESCO, and thus has an obligation to utilize the best possible facilities and research data to justify the great expenditure of taxpayers' money.

• There is an ever-increasing need for Australia to co-operate with its Asian neighbours in exchanging academic personnel and students, as well as participating in co-operative research projects. Asian students, teachers, and professionals are looking not only towards America for utilizing theoretical research data in for guidance and help, and in many cases this is not forthcoming.

New series planned

Following the preliminary analysis of the first Intensive English Language program conducted at Monash in 1970, it was possible to incorporate some insights and suggestions in the preparation of improved materials and new test series being developed by the Department of Education and Science. This year's course program will yield further results in evaluating specific language problems which are being analyzed for a number of nationalities represented in the students attending the course.

Fifty-nine students of 19 nationalities attended the 1971 course. Most of them had diplomas and postgraduate degrees in their field of specialization. Twenty-three professionals were represented in the group, but only 15 per cent of the students had been able to work in their professional field in Australia or continue their previous studies.

All of them were seriously hindered through language difficulties. If these immigrants were not trained in an intensive language program but resorted to two or three sessions a week in an evening course they would not reach their goals for a long time, if at all.

The time our students had been in Australia varied from two weeks to four years. Most of them, however, were arranged shortly after their arrival and conducted with the help of the respective governments. But for various reasons it is impossible to insist on such training as a requirement for the issue of a visa, particularly in the case of specialists, and of Australian students and professional personnel.

The American experience

In this connection it is interesting to note that American authorities have realized that much valuable talent was excluded from further studies because of a too rigid insistence on proficiency in English before admission to the U.S. was granted. The policy now is to offer to these people intensive language programs at an American university. Such programs were arranged shortly after their arrival and conducted with the help of the Department of Education and Science.

In the Monash program the students are trained in the four skill-areas of listening comprehension, reading, pronunciation, speaking and writing and they are given comprehensive weekly progress tests. The daily teaching-cycle provided for about three hours of review and two hours of practice in reading and writing with a certain amount of individualised supervised self-study activities. On weekends staff members arranged various social activities for the group which promote cultural integration and motivation in learning.

The syllabus of the course is based on clear and detailed specifications of aims and objectives which include terminal behaviour criteria in the language skills and in cultural patterns. Detailed descriptions and critical appraisals of the Monash English Program for Professional Migrants are published in the annual evaluation reports issued by Language Services. But it can be said that the results of the 1970 program and the preliminary results of this year's course were most rewarding and have fully justified the purpose and the goals of this new project at Monash.

April 5, 1971
FOOTBALL MAY NEVER BE THE SAME AGAIN

USING a wind tunnel, the Mechanical Engineering Department has worked out the best way to kick an Australian Rules football and what happens to the ball during flight.

One finding was that 45 degrees is NOT the best angle to kick a drop kick at as it is often taught in the football books.

This is because of high wind at this angle - the best angle is 39 degrees.

"Basically we have put in scientific language what we have learnt by trial and error," Dr. Deane Blackman, senior lecturer in mechanical engineering.

"We have to data to say what will happen when a ball is kicked in any particular way," he said.

The work began in 1969 with Hazel Unsworth and was carried on last year by Peter Kenyon, both of whom are first-year students at the time of doing the project.

The football was suspended in the wind tunnel at different angles to the effect of drag and the results were fed into the computer to simulate the flight.

Spin of the football of 20 metres a second as the launch velocity J were:

- Rotation is the most important element of any kicking style if it is correctly executed.
- The drop kick is the most stable form although, having a maximum range of only 55 metres (about 200 yards), under the conditions established.
- The torpedo style, nose first, travelled 64 metres (about 200 yards) but they prone to drift due to side wind lift force. A high rate of spin for the torpedo style is not desirable.

Malcolm Blackman, senior lecturer in psychology, originally asked Mechanical Engineering to determine how a football performed in flight.

He plans to use the data in further studies of the problems involved in learning to kick a football with greatest mechanical efficiency.

DIARY OF EVENTS

APRIL

April 5: Lunchtime concert, Alexander Theatre, 1.15 p.m. Henry Weinig (cello), Margaret Schiffold (piano), works by Delius, Bartok and Chopin.

April 7: Second of the series of lectures on architecture organised by the Art Faculty. The Vice-Chancellor, Dr J. A. L. Matheson, will talk at 1.15 p.m. on "The History of Engineering Structures."

14: Arts Faculty lecture. E. Granez (France) will talk on the color of several famous pieces of architecture, on "Ornamental Churrusc Architectura," at 1.15 p.m., B.I.

15: Part I of the German film, "Einstein's Hand," directed by Von Gistem. 1966, 82 minutes, will be shown in the Memorial, Arts Building, at 8 p.m.

16: Operetta, Alexander Theatre, 1.15 p.m. Piano recital by Leslie Howard, "Europeana." B.I.


25: Parent's Group, 11.30 a.m., lunchroom and conservatory, continue discussion of "The Greatest Generation,"


23: Arts Faculty lecture: David Yelken, founder of Merchant Builders. "Buildings of the Past," at 1.15 p.m., B.I.


26: Display of house furnishings by Mrs. Alice Gruicer, in the Commercial Bank of Australia office - "Monash House," Alexander Theatre, 1.15 p.m. Donald Woodcock (yinian), a piece by Zhao and violin - Bartok.

A "Cappella" choir, with instruments, Religious Centre, 6.15 p.m. Aranelli and Church Music, plus Renaissance and 18th Century instrumental pieces. Admission by passes.


Between April 21 - 24 Dr Horst Bliek, a German writer, will read from his latest work and give lectures on some of his previous contact on the German Establishment.

ANZAAS films now available

ANZAAS has advised Monash that it has a selection of 15 films available for showing during first and second term.

The films are obtainable from Mr. Patrick Matthew, Film Officer, Film Unit, University of New South Wales, P.O. Box 1, Kensington, N.S.W., 2033.

The following is a full list of the titles:

BM/4 "Life Cycle of the Root-Know Nematode - Meloidogyne Javanica"
BM/7 "The Preparations of the Brain"
BM/8 "Morphodynamics Study of Nervous System with small Issue in Culture - Spinal Ganglia"
BM/9 "Spermatozoon Dynamics and Agglutination"
BM/12 "Development of Motion in Human Beings"
BM/13 "The Genetic Reproduction of Stephanoprytus turris"
BM/16 "Man's Natural Barrier to the Environment"
BM/17 "Sputum"
BM/19A "The Biodigest and the Boy"

By CHRIS DAN

Monash Rowing Club is having its most successful year on record and with the season having completion Monash has an unassailable position in the Senior Premiership.

The Club has won six senior eight events, thirteen senior four and four senior pairs. Recently the Monash oarsmen were named in the 10-member State squad to compete in the Kings Cup in Perth on April 23 and 24. (As a matter of interest two of the other five squad members are Monash students although they row for Yarra Yarra.)

The picture above typifies the strain and effort needed by the team to get to the top. It is the Monash Senior Eight training on the Lower Yarra.

The team in: Bow, Jim Brough, 2, Chris Darling, 3, David Bishop, 4, Chris Danes, 5, Lawrence Stokes, 6, Erik Vahid Meyer, 7, John McCormack; stokers, Kerry Jelbart and Cox, Robert England. The team coach is Roger Morello, who, of course, was on the bank when the photo was taken.

The State squad members are Bishop, Stokes, Vahid Meyer, McCracken and Jelbart. Darling and McKand are second year Monash medical students, Bourke in an Arts graduate, Stokes is an engineering graduate and Danes is a law graduate.

Undoubtedly much of our success results from the work of Jelbart and Bishop who are international class oarsmen and stand a good chance, I believe, of getting to Monash for the 1972 Olympic Games.

The club got into a bit of trouble in the race just after Christmas. In a senior eight heat against Melbourne University an MMW launch strayed on to the course and collided with the Monash boat, smashing the bow section.

borrowed boat

We borrowed a boat for the Albert Park Regatta and were in the lead with 400 metres to go when the rigging failed and there wasn't anything else to do but stop.

The Monash boat took two weeks to repair but once we got back we had a string of success at Cole's, Ballarat and Deni.These was a win in the Senior Championships at Ballarat against five other teams, including the Tasmanian State crew.

The club's last race for the season will be during the May vacation in Brisbane at the Intervarsity championships.